



**United States
Department of
Agriculture**

Forest Service

Pacific
Southwest
Region

R5-BOT-TP-002

1995



In Cooperation With
Rancho Santa Ana
Botanic Garden



A Field Guide to The Rare Plants Of the Angeles National Forest



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A Field Guide to the Rare Plants of the Angeles National Forest

Gerard J. Allan, Orlando Mistretta,
Megan Tommerup and Kitty Blassey
Rancho Santa Ana Botanic Garden

and

William J. Brown, Jr.
Angeles National Forest

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Fort Collins CO 80526

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LOCATION OF NATIONAL FORESTS IN SOUTHERN CALIFORNIA

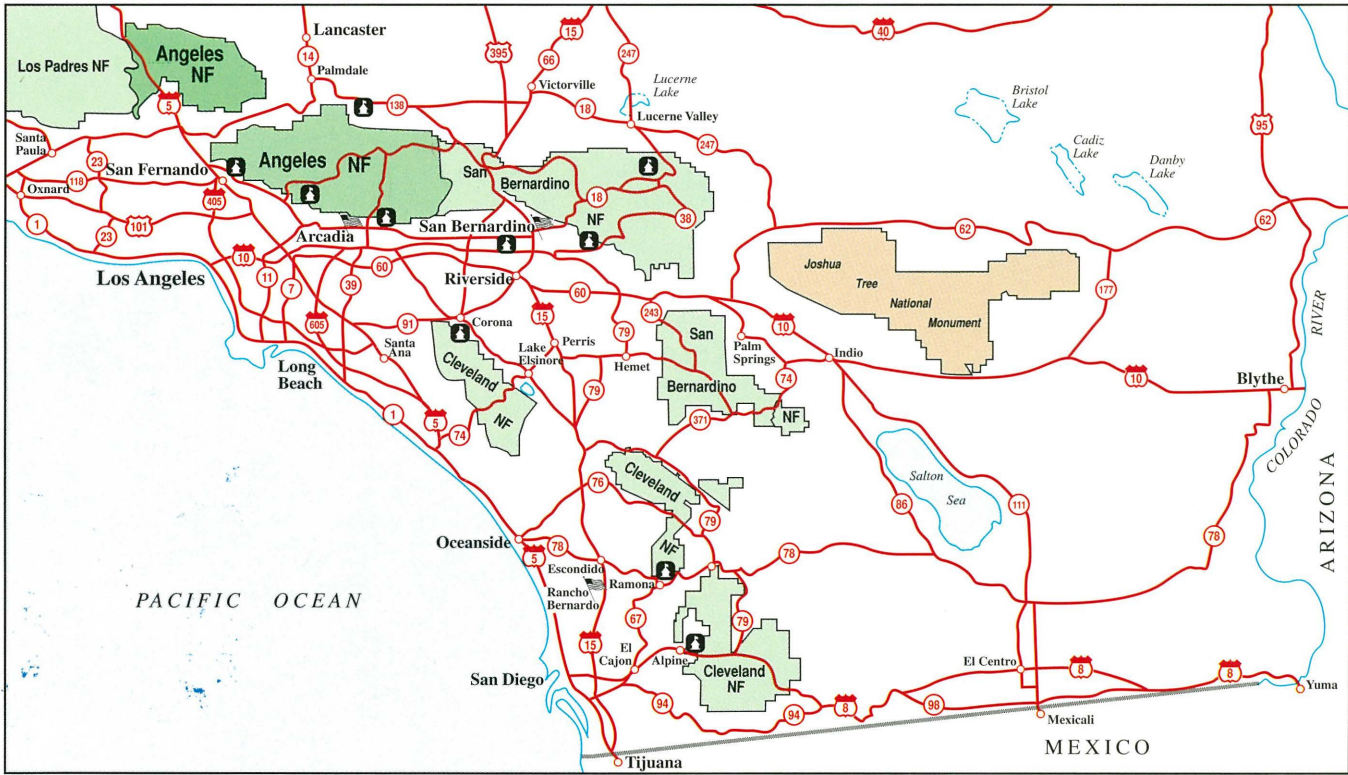


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INTRODUCTION

The lands managed by the Angeles National Forest include some of California's major centers of plant diversity. From ferns and fern allies to conifers and flowering plants, the Forest contains nearly one-fourth of all plant species found throughout the State. One noteworthy feature of the forest flora is that it contains a number of species (approximately five percent of the total) that are rare or endangered. The goal of this guide is to call attention to these rare and endangered species and to facilitate their easy recognition in the field. It is hoped that use of this guide will provide an increased awareness of these plants and thereby aid in their long-term preservation.

The Angeles National Forest comprises over 600,000 acres of Southern California wildlands. The majority of the Forest lies within the San Gabriel Mountains. It also includes significant and floristically important ranges to the northwest of the San Gabriel Mountain Range. These include Liebre Mountain, Sawmill Mountain, Red Mountain, Warm Springs Mountain, and portions of the Sierra Pelona Range. Within the Angeles National Forest, a variety of climatic zones, substrates and topographies combine to foster a highly diverse flora. For example, at least 1400 species, subspecies and varieties of vascular plants have been documented within the forest; a number of which are found nowhere else. Further, these plants are distributed throughout many diverse plant communities: alluvial fan scrub and coastal sage scrub on the slopes bordering the coast-side valleys; chaparral, mixed evergreen, conifer and riparian associations on both the northern and southern mid- to high-elevation slopes; and creosote scrub, Joshua tree woodland, pinyon-juniper woodland and sagebrush scrub along the northern foothills bordering the Mohave desert.

Although the species represented in this guide are only a small subset of this diverse flora, they are distributed among the various vegetation types mentioned above. They represent a variety of habitats and life forms including diminutive annuals found on sun baked desert flats, dominant trees of the coast side foothill woodlands, moisture loving grasses and herbs from shaded springs and streams, and delicate perennials from the highest mountain summits. Despite their diversity, the plants in this guide all share a common theme -- they are all rare or endangered. Rarity, however, has different meanings in different contexts, and can also arise in a number of different ways. The two most common ways are natural rarity in which a species becomes a specialist narrowly restricted to specific soil or climatic regimes; and artificial rarity which reduces a species geographic distribution either by destruction of habitat, invasion of habitat by alien species or by the efforts of over zealous plant collectors (for a

complete discussion of rarity, see Fiedler [1994]). For this guide, a rare plant is any species that is listed within the Inventory of Rare and Endangered Vascular Plants of California, a comprehensive guide published by the California Native Plant Society (Skinner and Pavlik, 1994). Some of them are legally protected by Federal or State law, some are designated as Sensitive Plant Species by the Angeles National Forest, and some are of more general conservation concern.

This guide has been developed to assist in the field identification of these rare plant species. The descriptions and line drawings highlight the unusual features that distinguish each species. The photographs provide a general sense of the habit and (in most cases) the habitat of each plant. In a few cases, line drawings for a particular subspecies or variety were not available, and a closely related variety or subspecies was used instead. The text and line drawings used in compiling this guide are from a variety of sources. The **Scientific Name**, **Common Name** and **Status** designations are taken from Skinner and Pavlik (1994), the **General Description** information is from Hickman (1993), the **Habitat**, **Range** and **Flowering Time** information is from Munz (1974). **Synonyms** (alternative scientific names for the same species) have been mostly acquired from Hickman (1993) or Munz (1974). Illustrations are taken with permission from Hickman (1993) and Abrams (1960).

Positive verification of a plant species usually requires the assistance of published floras such as The Jepson Manual (Hickman, 1993) or A Flora of Southern California (Munz, 1974), and reference to correctly identified herbarium specimens such as those housed at the herbarium of The Rancho Santa Ana Botanic Garden. Furthermore, plant species are often distinguished by a variety of technical morphological characters such as the shape of a leaf (e.g., elliptic, oblanceolate), or the arrangement of flowers on a stem axis (e.g., spike or raceme). To aid in understanding these features, a detailed glossary of technical terms is included. Lastly, ongoing floristic and monographic research continues to turn up new species and redefine species boundaries. This, coupled with the fact that closely related plant species often hybridize, makes determination of some species particularly problematic. Despite these difficulties, this guide is designed to assist in tentative identification and alert the user to the presence of species that can be accurately identified by further detailed investigation.

The documentation of the distribution of rare plant species in the Angeles National Forest is an ongoing process. Consequently, collections from new sites are often made. A database on the known locations of these species is maintained by the Natural Diversity Database of the California Department of Fish and Game. New locations should be reported to the

Natural Diversity Database and to the Forest biologist. This information is very useful in helping to develop the best management strategies for the preservation of the species. Documentation of new localities should be accompanied by voucher herbarium collections which include specific information about the plants morphological features, habitat, and precise location. These should be made by individuals who have knowledge of field collecting techniques and have acquired the appropriate authorization (i.e., collecting permits obtained from the Angeles National Forest). The Forest biologist should be consulted before any collection is undertaken.

The list of species represented here is not a complete list of the rare plant species that occur in the Angeles National Forest. Our understanding of the flora is not complete, and additional rare species will be found as investigations continue. Several rare plant species which are either poorly known, especially difficult to identify, or for which detailed information is lacking are included in an Appendix at the back of the guide.

As native habitat on private land continues to disappear, the biological diversity represented on public lands becomes an ever more valuable resource. The ability to manage and maintain this rich living legacy depends on our understanding of it. To that greater understanding this guide is dedicated.

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ACKNOWLEDGMENTS

The authors would like to express their appreciation for contributions of photographs supplied by Mark Elvin, RT and Shawn Hawke, Tim Ross and Walter Wisura. Advice on the format and content of the guide was provided by Tim Ross and Dr. J. Mark Porter.

GLOSSARY

- acuminate.** Having a long-tapered, sharp tip, the sides of which are concave.
- acute.** Having a short-tapered, sharp tip, the sides of which are convex or straight and converge at less than a right angle
- alternate.** 1. Arranged singly, often spirally, along an axis - e.g., one leaf per node. 2. Occurring between structures, or in different ranks, as "stamens alternate petals"
- annual.** Completing life cycle (germination through death) in one year or growing season, essentially non-woody.
- anther.** Pollen-forming portion of a stamen.
- ascending.** Curving or angling upward from base (generally 30~60° less than vertical or away from axis of attachment).
- awn.** 1. Bristle-like appendage or elongation, generally at the tip of a larger structure. 2. Stiff, needle-like pappus element in Asteraceae.
- banner.** Uppermost, often largest petal of many members of Fabaceae.
- basal.** Found at or near the base of a plant or plant part. Especially said of leaves clustered near the ground or of a placenta confined to the base of an ovary.
- bilateral.** Divisible into mirror-image halves in only one way.
- bisexual.** Flowers with both fertile stamens and fertile pistils.
- blade.** Expanded portion of a leaf or petal, generally flat but sometimes rolled or cylindric.
- bract.** Small, leaf- or scale-like structure associated with an inflorescence or cone. Generally subtends a branch, peduncle, pedicel, flower, or cone scale.
- bractlet.** 1. Relatively small, generally secondary bract within an inflorescence. 2. Bract-like structure on a pedicel that often does not directly subtend another structure.
- bulb.** Short underground stem and the fleshy leaves or leaf bases attached to and surrounding it - e.g. an onion.
- calyx** (calyces). Collective term for sepals; outermost or lowermost whorl of flower parts. Generally green and enclosing remainder of flower in bud. Sometimes indistinguishable from corolla.
- campanulate.** Bell-shaped.
- canescent.** Covered with dense, fine, generally grayish white hairs.
- caudex** (caudices). Short, sometimes woody, more or less vertical stem of a perennial at or beneath ground level.

cauline. Borne on a stem; not basal. Said especially of leaves borne along an above-ground stem.

ciliate. Having generally straight hairs along the margin or edge.

cismontane. This side of the mountains, or west of the main Sierran crest, as opposed to the deserts.

clone. Genetically identical individuals resulting from asexual reproduction (fragmentation of rhizomes or stolons, budding, etc.). Often used for an apparent population, the members of which are or were connected.

convex. Rounded outward, as the exterior of a curved surface.

cordate. Heart-shaped, as of a leaf. Sometimes said of a leaf base with rounded lobes of which the sides adjacent to the petiole are convex.

corm. Short, thick, unbranched, underground stem often surrounded by dry (not fleshy) leaves or leaf bases.

corolla. Collective term for petals; whorl of flower parts immediately inside or above calyx, often large and brightly colored. Sometimes indistinguishable from calyx.

crenate. Scalloped - e.g., margins with gen acute sinuses between shallow, rounded teeth.

cyme. Branched inflorescence in which the central or uppermost flower opens before the peripheral or

lower-most flowers on any axis.

deciduous. Falling off naturally at the end of a growing period. Generally said of leaves that fall seasonally and all together or of plants that are seasonally leafless.

decumbent. Mostly lying flat on the ground but with tips curving up.

dehiscent. Splitting open at maturity to release contents. Said especially of fruit or anthers.

dentate. Having margins with sharp, relatively coarse teeth pointing outward, not tipward.

dioecious. Male and female (or staminate and pistillate) plants separate. Said of a taxon in which individual plants produce either kind of unisexual fertile reproductive structures, but not both.

disk flower. In Asteraceae, the generally bisexual (never pistillate), generally radial, ligule-less flower with a 5- (rarely 4-) lobed corolla. Appearing without other flower types (discoid head) or with marginal ray or pistillate flowers (radiate or disciform heads, respectively).

dorsal. Pertaining to the back; the surface turned away from the axis.

elliptic. In the shape of an ellipse (flattened circle).

entire. Having margins that are continuous and smooth (i.e., without teeth, lobes, etc.).

exserted. Protruded out of surrounding structure(s).

fibrous. 1. Composed of fine or slender structures. 2. composed of many roots similar in length and thickness, as in grasses.

filament. Anther-stalk; the often thread-like portion of a stamen.

follicle. Dry, generally many-seeded fruit from a simple pistil, dehiscent on only one side, along a single suture. A flower may have a simple fruit of 1 follicle or an aggregate fruit of several follicles.

glabrous. Without hairs.

glandular. Bearing glands or gland-like.

glume. In Poaceae, each of generally two sheathing bracts that are the lowermost parts of a spikelet.

herb. Plant with little or no wood above ground; above-ground parts are of less than one year or growing season duration.

herbaceous. Lacking wood; having the characteristics of an herb.

hirsute. Rough with coarse or shaggy hairs.

indusium (indusia). In many ferns, a veil- or scale-like outgrowth of the leaf surface or margin that covers a sorus (cluster of sporangia).

inflorescence. An entire cluster of flowers and associated structures; e.g., axes, bracts, bractlets, pedicels.

involucre. Group of bracts more or less held together as a unit, subtending a flower, fruit (acorn cup), or inflorescence (the combined phyllaries of a daisy).

lanceolate. Narrowly elongate. widest in the basal half, often tapered to an acute tip.

leaflet. One leaf-like unit of a compound leaf, which may be primary, secondary, etc.

lemma. In Poaceae, the lower, generally larger of two sheathing bracts that directly subtend a flower: the lowermost part of a floret.

linear. Elongate, with nearly parallel sides, and narrower than oblong.

nectary. Structure that secretes nectar, often near the base of an ovary or in a perianth spur. Nectar is a nutritive solution consumed by animal visitors that are often pollinators.

nutlet. Small, dry nut (or nut-like fruit), generally one of several produced by a single flower.

ob- . A prefix indicating inversion of shape; e.g., lanceolate and oblanceolate leaf blades are widest below and above the middle, respectively.

oblong. Longer than wide, with nearly parallel sides and rounded corners; wider than linear.

ovate. Egg-shaped in two dimensions, widest below the middle, as of a leaf.

ovoid. Egg-shaped in three dimensions, widest below the middle, as of a fruit.

panicle. Branched inflorescence in which the basal or lateral flowers (or some of them) open before the terminal or central flowers on any axis.

pedicel. Stalk of an individual flower or fruit.

peduncle. Stalk of an entire inflorescence or of a flower or fruit not borne in an inflorescence.

pendent. Drooping, hanging, or suspended from a point of attachment above.

perennial. Living more than two years or growing seasons.

perianth. Calyx and corolla collectively, whether or not they are distinguishable.

petiole. Leaf stalk, connecting leaf blade to stem.

phyllary. In Asteraceae, a bract of the involucre that subtends a head.

pinnate. Feather-like, with two rows of structures on opposite sides of an axis. Generally said of veins, lobes, or leaflets arranged in two dimensions along either side of an axis.

pinnatifid. Pinnately cleft into narrow lobes not reaching to the midrib.

prostrate. Lying flat on the ground.

puberulent. Having hairs normally visible only when more magnified.

raceme. Unbranched inflorescence of pediceled

flowers that open from bottom to top.

radiate head. In Asteraceae, a head composed of central disk flowers and marginal ray flowers.

ray flower. In Asteraceae, a generally pistillate or bilateral flower with the long, outer portion of the corolla (ligule) often 3-lobed, appearing on the margin of a head and accompanied by more central disk flowers.

reflexed. Abruptly bent or curved downward or backward.

rhizome. Underground, often elongate, more or less horizontal stem. Distinguished from root by presence of leaves, leaf scars, scales, buds, etc.

rib. 1. Ridge, as on a fruit. 2. Raised vein, as on a leaf or perianth part.

rosette. A radiating cluster of leaves generally at or near ground level.

rotate. Wheel-shaped, spreading, or saucer-shaped. Said of a fused corolla with a short or nonexistent tube and a spreading limb.

saprophyte. A plant living on dead organic matter and hence without chlorophyll.

scape. A leafless peduncle rising from the ground in acaulescent plants.

sepal. Individual member of the calyx, whether fused or not, generally green.

serrate. Having margins with sharp teeth generally pointing tipward, not outward.

sessile. Without a petiole, peduncle, pedicel, or other kind of stalk.

sheath. Structure that surrounds or partly surrounds another structure, often tubular, as a leaf base in Apiaceae or Poaceae.

shrub. 1. A woody plant of relatively short maximum height. 2. A woody plant much-branched from the base.

sinus. An indentation, as between adjacent lobes of a margin.

spike. Unbranched inflorescence of sessile flowers, nearly always opening from bottom to top.

stamen. Male reproductive structure of a flower, typically composed of a stalk-like filament and a terminal, pollen-producing anther.

staminode. Sterile stamen, often modified in appearance.

stellate. Star-like. Generally said of a hair with three or more branches radiating from a common point.

stipule. Appendage at base of petiole, generally paired, variable in form but often leaf- or scale-like, sometimes a spine.

strigose. With stiff, straight, sharp, appressed hairs.

style. Stalk-like portion that connects ovary to stigma in many pistils.

sub. A prefix meaning almost, just below, or somewhat imperfectly.

subshrub. A plant with the lower stems woody, the upper stems and twigs not woody (or less so) and dying back seasonally.

tomentose. Covered with densely interwoven, generally matted hairs.

tube. In flowers with fused sepals or petals. the more or less cylindric, fused portion at the base.

umbel. Inflorescence in which three to many pedicels radiate from a common point. May be compound, in which case larger inflorescence branches (rays) also radiate from a common point. Characteristic of but not confined to Apiaceae.

valve. One of the parts into which a capsule or legume splits.

ventral. relating to the inward edge of an organ, in relation to the axis; anterior; front; opposed to dorsal.

villous. Bearing long and soft and not matted hairs; shaggy.

whorl. Group of three or more structures of the same kind (generally leaves or flower parts) at one node.

wing. 1. Thin, flat extension or appendage of a surface or margin. 2. In many members of Fabaceae, each of two lateral petals.

CODES AND ABBREVIATIONS

THE CNPS LISTS

- List 1A Presumed extinct in California.
- List 1B Rare or Endangered in California and elsewhere.
- List 2 Rare or Endangered in California, more common elsewhere.
- List 3 Need more information.
- List 4 Plants of limited distribution.

THE CNPS R-E-D CODE

R (Rarity)

- 1 - Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
- 2 - Distributed in a limited number of occurrences, occasionally more if each occurrence is small.
- 3 - Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported.

E (Endangerment)

- 1 - Not endangered.
- 2 - Endangered in a portion of its range.
- 3 - Endangered throughout its range.

D (Distribution)

- 1 - More or less widespread outside California.
- 2 - Rare outside California.
- 3 - Endemic to California.

STATE-LISTED PLANTS

- CE State-listed, endangered.
- CT State-listed, threatened.
- CR State-listed, rare.
- CC Candidate for State listing.

FEDERALLY-LISTED PLANTS

- FE Federally-listed, endangered.
- FT Federally-listed, threatened.
- PE Federally-proposed, endangered.

PT	Federally-proposed, threatened.
C1	Enough data are on file to support federal listing.
C2	Threat and/or distribution data are insufficient to support federal listing.
C2*	Threat and/or distribution data are insufficient to support federal listing, but the plant is presumed extinct.
C3a	Extinct.
C3b	Taxonomically invalid.
C3c	Too widespread and/or not threatened.

MISCELLANEOUS ABBREVIATIONS

cm	centimeter
CNPS	California Native Plant Society
diam	diameter
dm	decimeters
fed	federal
fl	flower
fls	flowers
fr	fruit
ft	feet
gen	generally
infl	inflorescence
lf	leaf
lflets	leaflets
m	meters
mm	millimeter
mtn	mountain
st	stem
sts	stems
>	greater than
<	less than
±	more or less

INVENTORY OF PLANTS

A list of the plant taxa that are included in the Field Guide (and Appendix) is provided below, along with their PLANTS database symbol. The PLANTS database encompasses plant information utilized by the Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service) for automated applications utilized by the agency. The foundation for the PLANTS database is a list of native or naturalized vascular and nonvascular plants known to occur in the United States. PLANTS is the plant data standard for the NRCS, its cooperators, and clients. It provides the information necessary for database administrators to utilize in revising, standardizing, integrating, and sharing their existing data. The NRCS has maintained a list of plant names and associated data for over twenty-five years to aid data automation. The PLANTS database replaces the National List of Scientific Plant Names (USDA, SCS 1982) that was prepared in cooperation with the Smithsonian Institution.

<i>Acanthomintha obovata</i> ssp. <i>cordata</i>	ACOBC
<i>Arctostaphylos gabrielensis</i>	(no code)
<i>Arenaria macradenia</i> var. <i>kuschei</i>	ARMAK2
<i>Aster greatae</i>	ASGR2
<i>Astragalus bicristatus</i>	ASBI
<i>Astragalus brauntonii</i>	ASBR6
<i>Astragalus lentiginosus</i> var. <i>antonius</i>	ASLEA3
<i>Astragalus leucolobus</i>	ASLE11
<i>Berberis nevinii</i>	MANE3
<i>Boykinia rotundifolia</i>	BORO3
<i>Brodiaea filifolia</i>	BRFI
<i>Calandrinia breweri</i>	CABR3
<i>Calochortus catalinae</i>	CACA5
<i>Calochortus clavatus</i> ssp. <i>clavatus</i>	CACLC2
<i>Calochortus clavatus</i> var. <i>gracilis</i>	CACLG
<i>Calochortus palmeri</i> var. <i>palmeri</i>	CAPAP4
<i>Calochortus plummerae</i>	CAPL2
<i>Calochortus striatus</i>	CAST2
<i>Calystegia peirsonii</i>	CAPE18
<i>Camissonia lewisii</i>	CALE26
<i>Canbya candida</i>	CACA8
<i>Castilleja gleasonii</i>	CAGL17
<i>Castilleja plagiotoma</i>	CAPL7
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	CHPA4

<i>Claytonia lanceolata</i> var. <i>peirsonii</i>	CLLAP2
<i>Dodecahema leptoceras</i>	DOLE
<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	DUCYC2
<i>Dudleya densiflora</i>	DUDE2
<i>Dudleya multicaulis</i>	DUMU
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	ERDE5
<i>Erigeron breweri</i> var. <i>bisanctus</i>	(no code)
<i>Erigeron breweri</i> var. <i>jacintus</i>	ERBRJ
<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	ERKEA
<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	ERMJ
<i>Eriogonum umbellatum</i> var. <i>minus</i>	ERUMM2
<i>Galium angustifolium</i> ssp. <i>gabrielense</i>	GRAANG2
<i>Galium grande</i>	GAGR5
<i>Galium jepsonii</i>	GAJE
<i>Galium johnstonii</i>	GAJO
<i>Harpagonella palmeri</i>	HAPA7
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	HENUP
<i>Heuchera abramsii</i>	HEAB
<i>Heuchera elegans</i>	HEEL2
<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	HUVEG
<i>Juncus duranii</i>	(no code)
<i>Lepechinia fragrans</i>	LEFR
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	LEVIR
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	LIHUO2
<i>Lilium parryi</i>	LIPA2
<i>Linanthus concinnus</i>	LICO2
<i>Lupinus elatus</i>	LUEL
<i>Lupinus excubitus</i> var. <i>johnstonii</i>	LUEXJ
<i>Lupinus peirsonii</i>	LUPE2
<i>Malacothamnus davidsonii</i>	MADA
<i>Monardella cinerea</i>	MOCI2
<i>Monardella macrantha</i> ssp. <i>hallii</i>	MOMAH
<i>Monardella viridis</i> ssp. <i>saxicola</i>	MOVIS4
<i>Muhlenbergia californica</i>	MUCA
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	OPBAB
<i>Oreonana vestita</i>	ORVE
<i>Orobancha valida</i> ssp. <i>valida</i>	ORVAV
<i>Oxytheca caryophylloides</i>	OXCA3
<i>Perideridia pringlei</i>	PEPR5
<i>Phacelia exilis</i>	PHEX
<i>Polygala cornuta</i> var. <i>fishiae</i>	POCOF
<i>Potentilla glandulosa</i> ssp. <i>ewanii</i>	POGLE
<i>Quercus engelmannii</i>	QUEN
<i>Romneya coulteri</i>	ROCO
<i>Selaginella asprella</i>	SEAS

<i>Senecio ionophyllus</i>	SEIO
<i>Streptanthus bernardinus</i>	STBE
<i>Swertia neglecta</i>	FRNE
<i>Syntrichopappus lemmonii</i>	SYLE
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	THPUS
<i>Thermopsis californica</i> var. <i>argentata</i>	(no code)

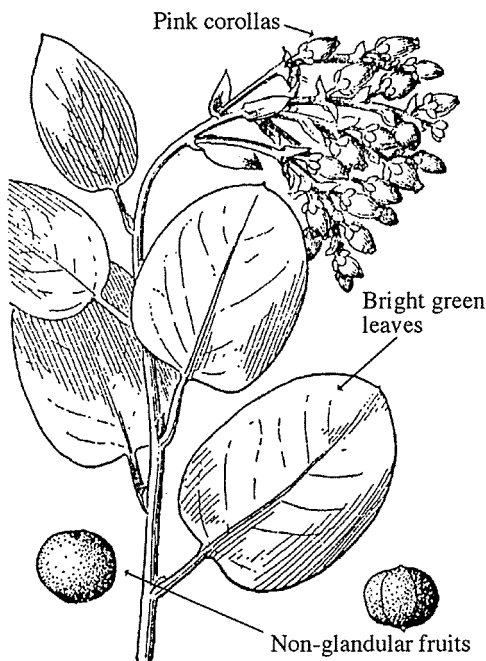
Inventory of Plants



Flowers of *Arctostaphylos gabrielensis* by O. Mistretta and M. Elvin.



Habitat of *Arctostaphylos gabrielensis* by O. Mistretta and M. Elvin.



ARCTOSTAPHYLOS GABRIELLENSIS

Scientific name: *Arctostaphylos gabriellensis* P. Wells

Common name: San Gabriel manzanita

Family (Common name): Ericaceae (Heath family)

Synonyms: —

General description: Shrub 1-2 m; burl large, spheric. **STS** erect; twigs finely tomentose. **LVS** erect; petiole 5-8 mm; blade 2--4 mm, 1.5-2.5 cm wide, elliptic, ovate or oblong ovate, base \pm wedge shaped to rounded, margin entire, surfaces alike, bright green, shiny, sparsely puberulent, becoming glabrous, smooth. **INFL:** branches 4-7; axes \pm crowded; bracts gen 3-5 mm, scale-like, deltate, acuminate, sharp pointed; lowest bract 10-15 mm, lf-like, \pm lanceolate; pedicel 5-10 mm, hairy. **FR** 8-14 mm wide, subspheric, sparsely puberulent; stones \pm separable or fused into 1 \pm depressed unit, surface pitted between ribs.

Habitat: Rocky outcrops, chaparral; \pm 5000 ft.

Range: San Gabriel mountains, Mill Creek Summit area.

Flowering time: April-May

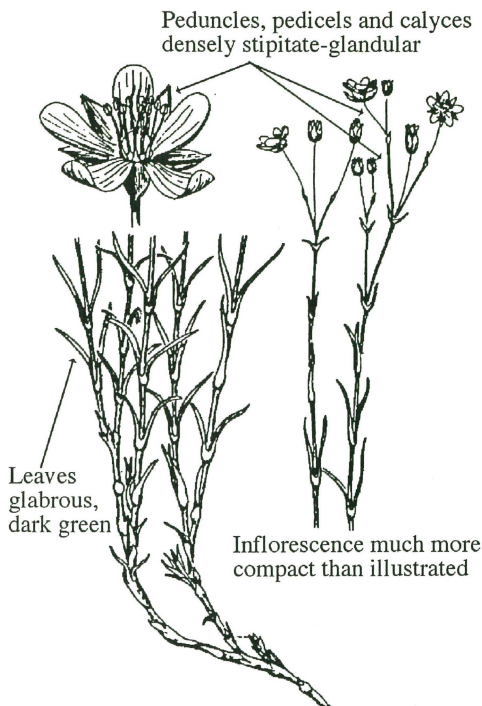
Distinguishing features: Bracts scale-like; Lf bright green, shiny, burl present.

Status: CNPS list: 1B; R-E-D Code: 2-2-3; State/Federal: /C2.

Notes: Recently described. Difficult to distinguish from closely related species such as *A. glauca*.



Close-up of *Arenaria macradenia* var. *kuschei* by T.S. Ross.



ARENARIA MACRADENIA* VAR. *KUSCHEI

Scientific name: *Arenaria macradenia* var. *kuschei* (Eastw.) Maguire

Common name: Forest Camp Sandwort

Family (Common name): Caryophyllaceae (Pink Family)

Synonyms: —

General description: Low subshrub, tufted, green. ST 20-35 cm, leafy into the inflorescence. LVS awl-like, curved downward, \pm 1.6-2.6 mm wide at base. INFL compact, branches densely glandular-hairy. Pedicels 1.5-6 mm, peduncles 1.5-6.5 mm. FL sepals 5-7 mm densely glandular-hairy. Petals white.

Habitat: Opening in oak dominated chaparral.

Range: Previously known from one collection in 1929, at "Forest Camp, Mojave Desert". One population discovered on Liebre Mtn. in 1994.

Flowering time: June-July

Distinguishing features: Inflorescence congested; peduncles, pedicels, and calyces densely stipitate-glandular.

Status: CNPS list: 3; R-E-D Code: ?-?-3; State/Federal: /C2

Notes: *A. macradenia* var. *arcuifolia* also occurs on forest. Could be easily confused with *A. macradenia* var. *kuschei*.



Close-up of *Aster greatae* by O. Mistretta.



ASTER GREATAE

Scientific name: *Aster greatae* Parish

Common name: Greata's aster

Family (Common name): Asteraceae (Sunflower family)

Synonyms: None (sometimes misspelled *Aster greatai*)

General description: Perennial herb. **ST** ascending to erect, 5-12 dm, sparsely hairy. **LF** elliptic to obovate-oblong, \pm clasping, entire to serrate, hairy. **INFL** heads in an open cyme, generally leafy bracted. **FL** ray flowers many, pale violet to pink; disk flowers yellow. **FR** hairy.

Habitat: Moist or dry places in canyons, 2000-4000 ft.; Chaparral, Southern Oak Woodland.

Range: Southern slopes of the San Gabriel Mts.

Flowering time: August-October

Distinguishing features: Leaves rough-hairy on both surfaces, elliptic to obovate-oblong, cauline > basal; phyllaries acute.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: /C3c

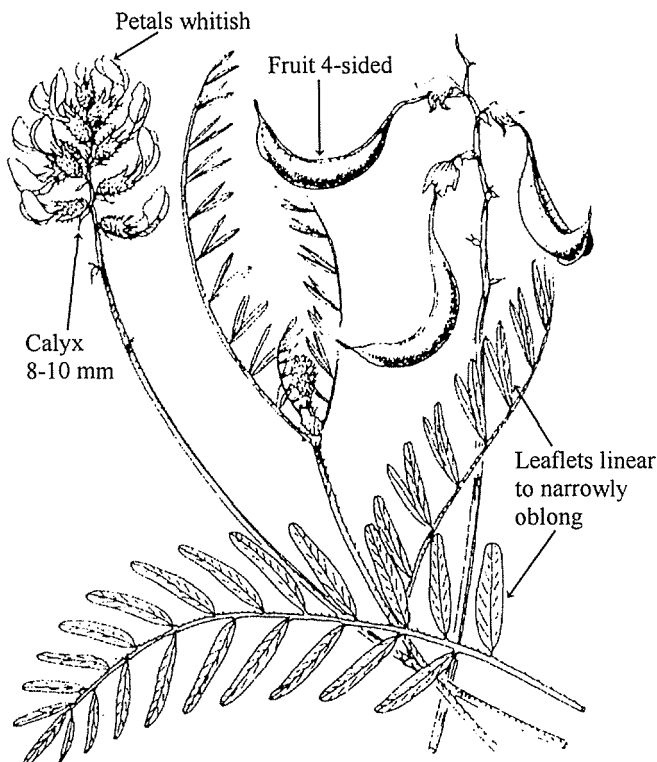
Notes: Difficult to distinguish from *Aster hesperius* and *Aster occidentalis*.



Left: Close-up of *Astragalus bicristatus* by RT Hawke.

Right: Fruits of *Astragalus bicristatus* by O. Mistretta.





ASTRAGALUS BICRISTATUS

Scientific name: *Astragalus bicristatus* Gray

Common name: Crested milk-vetch

Family (Common name): Fabaceae (Legume family)

Synonyms: —

General description: Perennial herb. **ST** ascending or sprawling < 5 dm. **LF** 3-14 cm; lower stipules fused around stem into low sheath; leaflets 11-23, linear to narrowly oblong. **INFL** flowers 5-20, ascending; petals greenish whitish, sometimes tinged with lilac. **FR** pendent, body 20-43 mm, 6-9 mm wide, incurved, glabrous.

Habitat: Rocky or sandy places, 5800-9000 ft.; Montane Coniferous Forest

Range: eastern San Gabriel Mts and San Bernardino Mts.

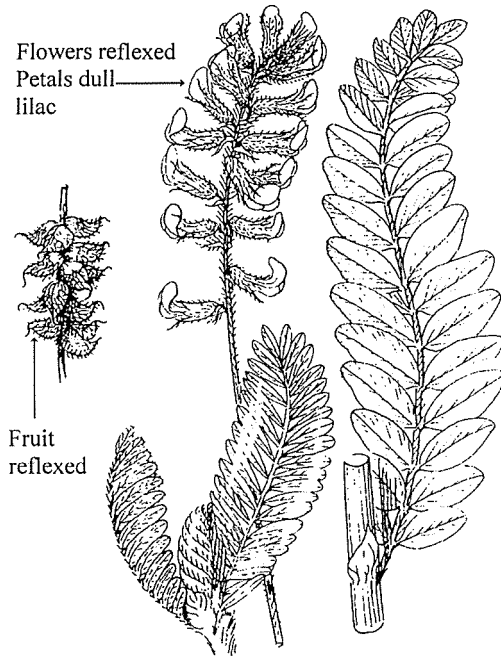
Flowering time: May-August

Distinguishing features: Calyx 8-10 mm; petals whitish; fruit 4-sided.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: None



Close-up of *Astragalus brauntonii* by O. Mistretta.



ASTRAGALUS BRAUNTONII

Scientific name: *Astragalus brauntonii* Parish

Common name: Braunton's milk-vetch

Family (Common name): Fabaceae (Legume family)

Synonyms: —

General description: Stout perennial. **ST** ± erect, 7-15 dm, covered with dense, white-woolly hairs. **LF** 3-16 cm, obovate, hairy. **INFL** spike-like, densely flowered. **FL** petals dull lilac. **FR** reflexed, not bladdery.

Habitat: Brushy places, fire-breaks, etc., below 1500 ft.; chaparral

Range: Hills bordering the Los Angeles Basin.

Flowering time: February-June.

Distinguishing features: Flowers reflexed; corolla dull lilac; fruit reflexed, deciduous, < 10 mm, densely wavy-hairy.

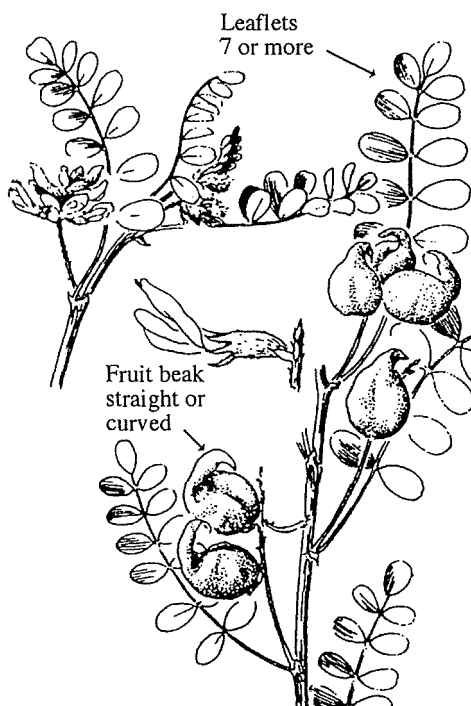
Status: CNPS list: 1B; R-E-D Code: 3-2-3; State/Federal: /PE



Close-up of *Astragalus lentiginosus* var. *antonius* by RT Hawke.



Habitat of *Astragalus lentiginosus* var. *antonius* by O. Mistretta.



ASTRAGALUS LENTIGINOSUS VAR. *ANTONIUS*

Scientific name: *Astragalus lentiginosus* Hook. var. *antonius* Barneby

Common name: San Antonio milkvetch

Family (Common name): Fabaceae (Legume family)

Synonyms: —

General description: Perennial herb. **ST** prostrate or spreading, 1-3 dm. **LF** 3-8 cm; lflets 11-21, 3-11 mm, \pm obovate, densely strigose.

INFL: fls 10-15; axis in fr < 5 cm **FL:** petals purple, banner 9-10.5 mm, keel 7.2-8.2 mm. **FR** 14-30 mm, 10-18 mm wide, plumply ovoid to \pm spheric, bladdery, papery, sparsely strigose, straw colored, \pm shiny, beak erect, 3-6 mm.

Habitat: open slopes in yellow pine forest, 5000-8500 ft.

Range: eastern San Gabriel Mtns.

Flowering time: April-July

Distinguishing features: leaflets 7 or more, densely hairy; fruit beak straight or curved upward.

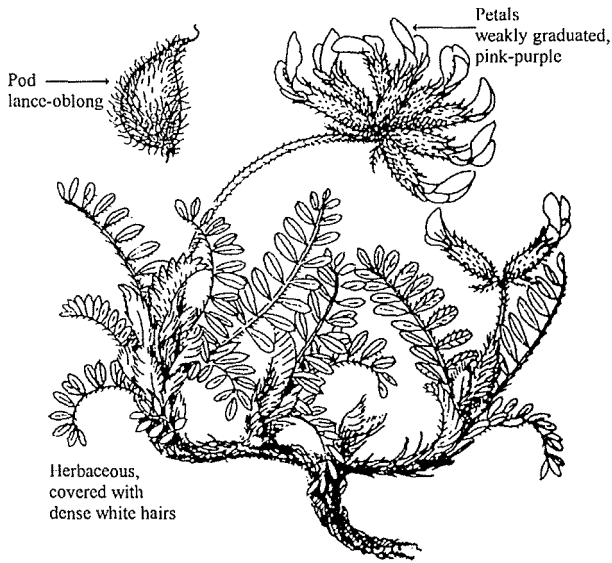
Status: CNPS list: 1B; R-E-D Code: 3-1-3; State/Federal: /C2.



Fruits of *Astragalus leucolobus* by O. Mistretta.



Close-up of *Astragalus leucolobus* by RT Hawke.



ASTRAGALUS LEUCOLOBUS

Scientific name: *Astragalus leucolobus* M.E. Jones

Common name: Big Bear Valley woollypod

Family (Common name): Fabaceae (Legume family)

Synonyms: *Astragalus Purshii* Douglas var. *leucolobus* Jepson

General description: Perennial herb covered with dense white hairs.

ST < 7 cm. **LF** grayish, 1.5 -9 cm, leaflets 3-13 mm, \pm widely obovate.

INFL 5-13 flowered, **FL** petals weakly-graduated, pink-purple. **FR** 5-8 mm wide, covered with dense wavy hairs.

Habitat: Openings in sandy woods and stony lake-shores in the mountains overlooking the deserts, 6000-8000 ft.; Yellow Pine Forest, Sagebrush Scrub.

Range: eastern San Gabriel Mts., San Bernardino and Santa Rosa Mts.

Flowering time: May-July

Distinguishing features: Banner 16-18 mm long, racemes surpassing the leaves; pod lance-oblong in outline, deeply and narrowly grooved dorsally, the valves rigid, inflexed as a narrow partition.

Status: CNPS list: 1B; R-E-D Code: 2-2-3; State/Federal: /C2.

Notes: Sometimes confused with *A. purshii* var. *longilobus* whose petals are strongly graduated and bright purple with wings much smaller than the banner.

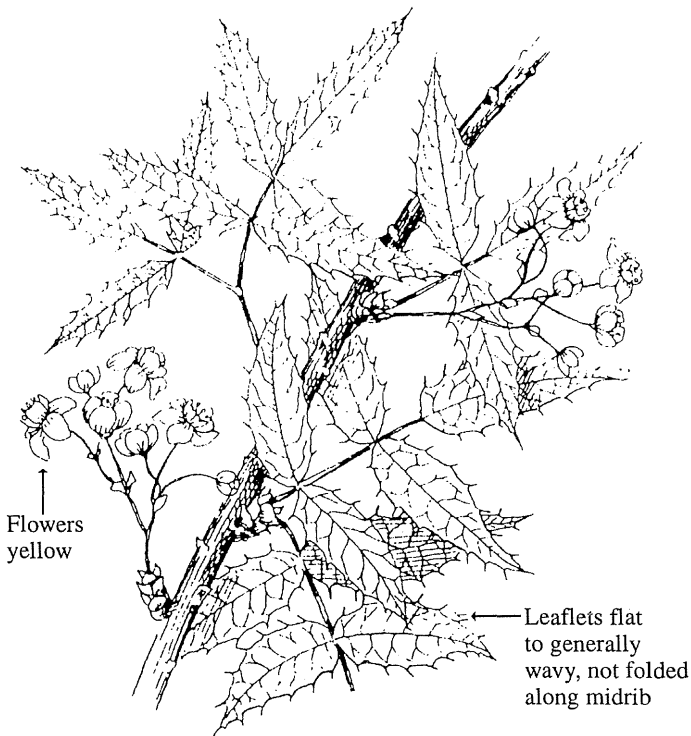


Top Left: Flowers of *Berberis nevinii* by O. Mistretta.

Top Right: Fruits of *Berberis nevinii* by O. Mistretta.



Habitat of *Berberis nevinii* by O. Mistretta.



BERBERIS NEVINII

Scientific name: *Berberis nevinii* Gray

Common name: Nevin's barberry

Family (Common name): Berberidaceae (Barberry family)

Synonyms: *Mahonia nevinii* (Grey) Fedde

General description: Shrub 1-4 m tall. **ST** erect. **LF** blade 4-8 cm long, leaflets 3-5 bearing 5-16 spine-tipped teeth ca 1 mm in length.

INFL loosely flowered 3.5-6.5 cm long. **FL** yellow. **FR** reddish berry.

Habitat: Sandy and gravelly places below 2000 ft.; Coastal Sage Scrub, Chaparral.

Range: Northern Los Angeles Co. (San Francisquito Canyon), San Fernando Valley, and Arroyo Seco; San Timoteo Canyon near Redlands, and Vail Lake in Riverside County.

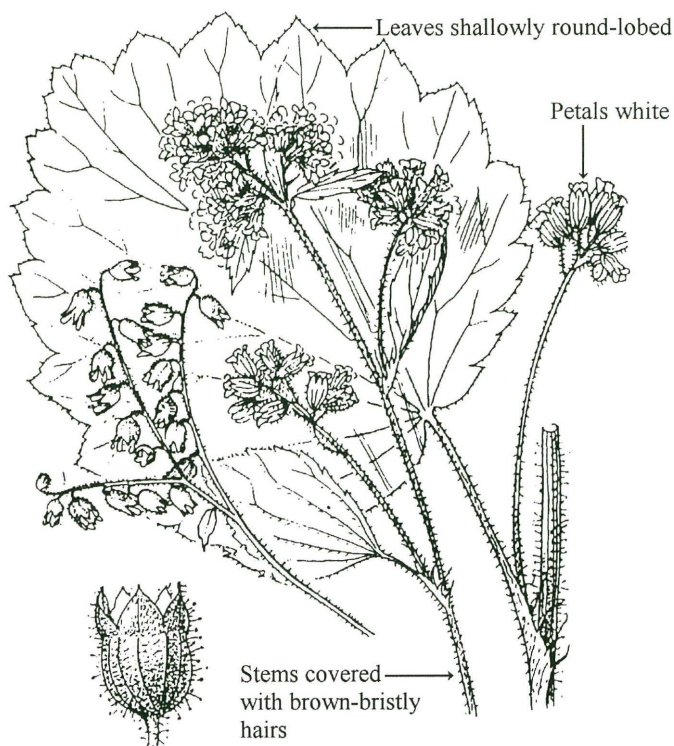
Flowering time: March-April

Distinguishing features: Leaflets flat to \pm wavy, not folded along midrib, margin serrate, teeth generally > 8 ; spine tips ± 1 mm.

Status: CNPS list: 1B; R-E-D Code: 3-3-3; State/Federal: CE/C1



Close-up of *Boykinia rotundifolia* by O. Mistretta.



BOYKINIA ROTUNDIFOLIA

Scientific name: *Boykinia rotundifolia* Parry

Common name: Round-leaved boykinia

Family (Common name): Saxifragaceae (Saxifrage family)

Synonyms: None

General description: Stout herb, 3-8 dm high. **ST** covered with brown-bristly, glandular hairs. **LF** blades round-cordate ca. 5-12 cm wide, margins \pm shallowly round-lobed with crenate-dentate teeth. **INFL** 2-15 dm, tapered, dense. **FL** calyx lobes 2-3 mm, triangular; petals white.

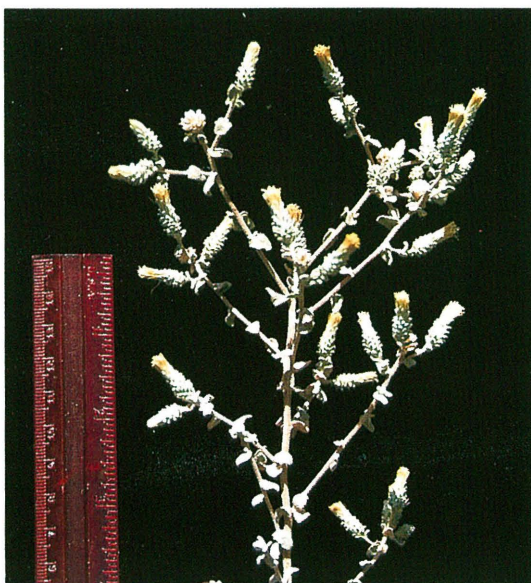
Habitat: Wet places in canyons, below 6000 ft., largely chaparral.

Range: Elsinore and San Jacinto Mts. to south face of San Bernardino and San Gabriel Mts.; Cuyama Valley in Santa Barbara County.

Flowering time: June-July

Distinguishing features: Petals generally < 3 mm \pm = calyx lobes; stipules inconspicuous.

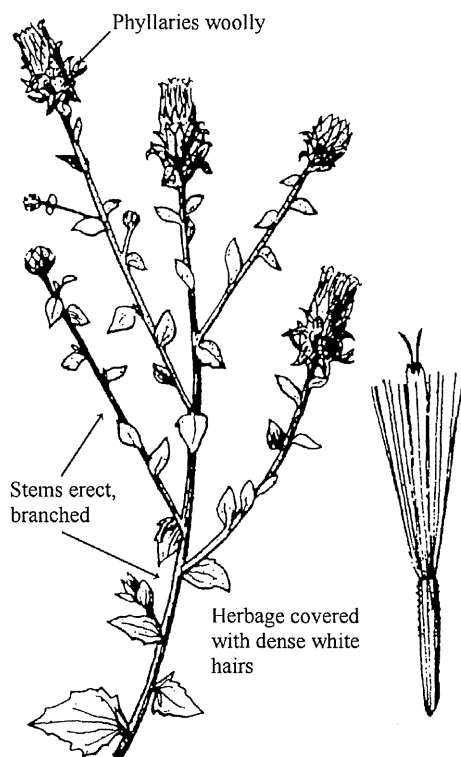
Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Close-up of *Brickellia nevinii* by O. Mistretta.



Habitat of *Brickellia nevinii* by O. Mistretta.



BRICKELLIA NEVINII

Scientific name: *Brickellia nevinii* Gray

Common name: Nevin's brickellbush

Family (Common name): Asteraceae (Aster family)

Synonyms: —

General description: Shrub 3-5 dm tall. **ST** erect, branched, dense, white-tomentose. **LF** alternate, ovate \pm sessile and covered with dense white hairs. **INFL** heads \pm 1.5 cm, few in panicle-like clusters on short branches. **HEADS** \pm 23-fld. phyllaries woolly.

Habitat: Dry slopes and washes, 800-5500 ft.; Coastal Sage Scrub, Chaparral Scrub.

Range: From Santa Monica Mts. and south face of San Gabriel Mts. to Santa Barbara Co., and southwest Kern Co.

Flowering time: September-November

Distinguishing features: Closely allied to *B. microphylla* and *B. watsonii*, but distinct in having white-woolly leaves.

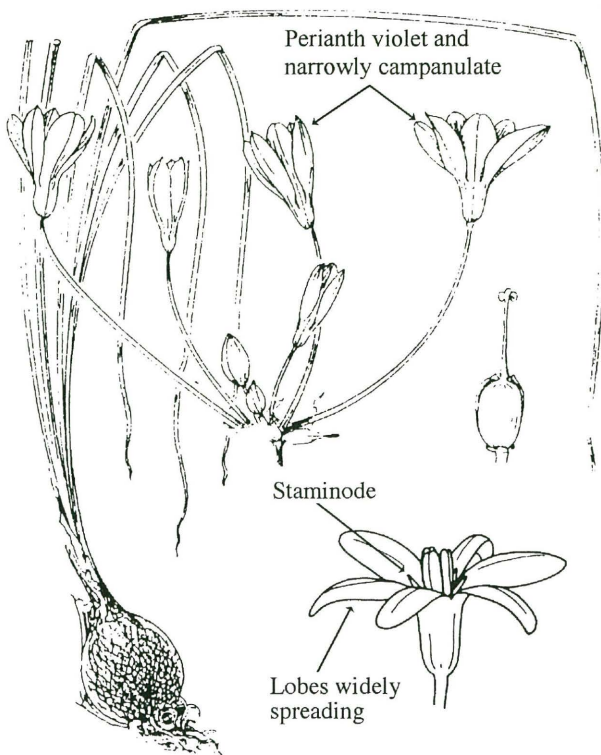
Status: CNPS list: considered but rejected; too common.



Flower of *Brodiaea filifolia* by O. Mistretta.



Habitat of *Brodiaea filifolia* by O. Mistretta.



BRODIAEA FILIFOLIA

Scientific name: *Brodiaea filifolia* S. Watson

Common name: Thread-leaved brodiaea

Family (Common name): Liliaceae (Lily family)

Synonyms: —

General description: Herbaceous perennial from corm. **ST** Scape 2-4 dm arising from corm with several narrow leaves nearly as long as scape and 1-2 mm wide. **FL** perianth violet and narrowly campanulate.

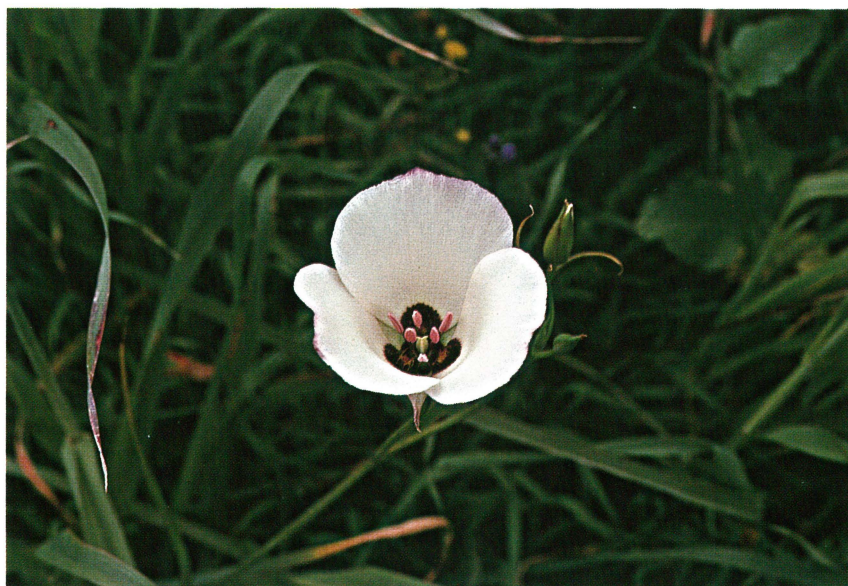
Habitat: Local in heavy clay soil below 2000 ft.; Coastal Sage Scrub, Chaparral.

Range: Glendora, San Bernardino Valley, Perris, Vista.

Flowering time: March-June

Distinguishing features: Perianth violet-purple, tube 6-8 mm narrowly cylindric, lobes 9-12 mm long, widely spreading; staminodes linear, 6-7 mm long; anther filaments about 1.0 mm long.

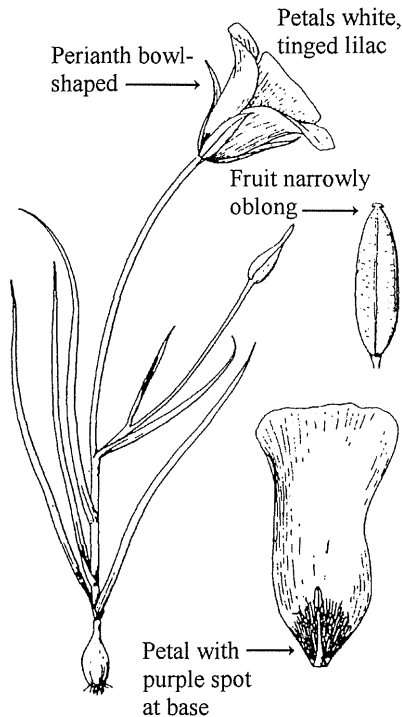
Status: CNPS list: 1B; R-E-D Code: 3-3-3; State/Federal: CE/C2



Close-up of *Calochortus catalinae* by M. Elvin.



Habitat of *Calochortus catalinae* by M. Elvin.



CALOCHORTUS CATALINAE

Scientific name: *Calochortus catalinae* S. Watson.

Common name: Catalina mariposa lily

Family (Common name): Liliaceae (Lily family)

Synonyms: —

General description: Perennial herb from bulb. **ST** erect 2-6 dm tall.

LF basal, linear 1-2.5 dm long, 3-6 mm wide. **FL** 1-several, bowl-shaped, corolla white, tinged with lilac or light purple with a purple spot at the base of each sepal and petal. **FR** erect 2-5 cm long.

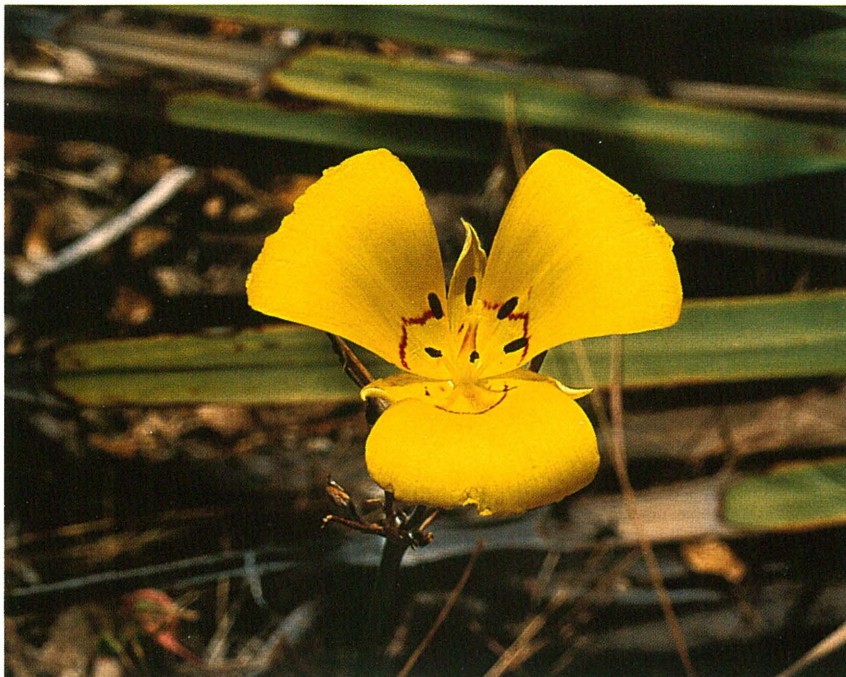
Habitat: Heavy soil, on open grassy slopes and openings in brush, below 2000 ft.; Valley Grassland, Chaparral.

Range: South Central Coast, west South Coast, Channel Islands

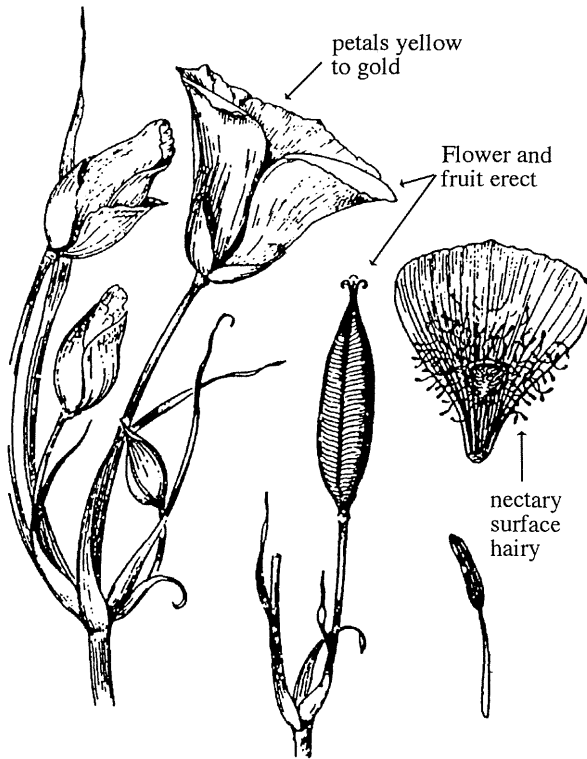
Flowering time: February-May

Distinguishing features: Perianth bowl-shaped; sepals 20-30 mm, purple-spotted near base; petals white, tinged lilac, purple-spotted near base, nearly glabrous; fruit narrowly oblong, not angled.

Status: CNPS list: 4; R-E-D Code: 1-2-3; State/Federal: None



Close-up of *Calochortus clavatus* var. *gracilis* by M. Elvin.



CALOCHORTUS CLAVATUS VAR. *GRACILIS*

Scientific name: *Calochortus clavatus* S. Watson var. *gracilis* F. Ownbey

Common name: Slender mariposa lily

Family (Common name): Liliaceae (Lily family)

Synonyms: —

General description: Perennial herb from bulb. **ST** 20-30 cm, slender. **LVS:** basal 10-20 cm, withering. **INFL** ± umbel-like; fls 1-6, erect; bracts 4-8 cm, bases widest. **FL;** petals 30-40 mm, sparsely hairy, with reddish brown line above small, shallow, nectary; anthers 4-7 mm.

FR erect, 6-9 cm, narrowly lanceolate, angled.

Habitat: Canyons, slopes below 4000 ft.; Chaparral.

Range: south base of San Gabriel Mts.

Flowering time: April-June

Distinguishing features: Flower and fruit erect; nectary surface hairy; Petal yellow to gold; stem < 30 cm.

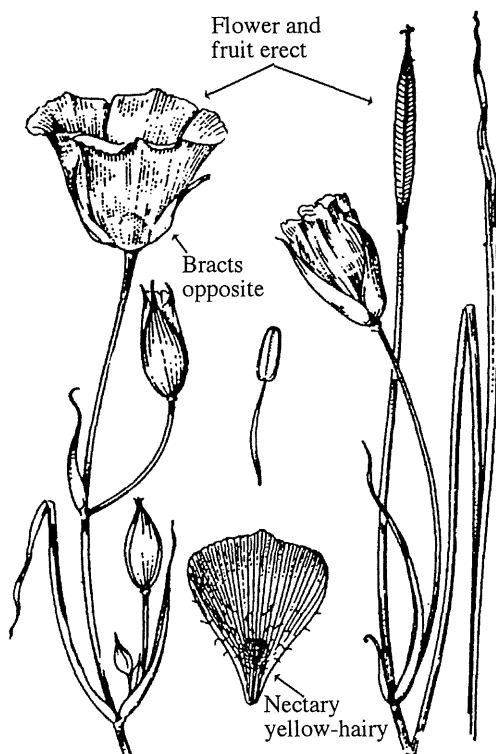
Status: CNPS list: 1B; R-E-D Code: 3-2-3; State/Federal: /C2.



Close-up of *Calochortus palmeri* var. *palmeri* by M. Elvin.



Habitat of *Calochortus palmeri* var. *palmeri* by M. Elvin.



CALOCHORTUS PALMERI* VAR. *PALMERI

Scientific name: *Calochortus palmeri* S. Watson var. *palmeri*

Common name: Palmer's mariposa lily

Family (Common name): Liliaceae (Lily family)

Synonyms: —

General description: Perennial herb from bulb. **ST** 30-60 cm, straight, gen branched; base bulbet bearing. **LVS:** basal 10-20 cm, withering. **INFL:** fls 1-6, erect; bracts 1-2 cm, alternate. **FL:** perianth widely bell shaped; sepals \pm 30 mm, gen brown spotted near base; petals 20-30 mm, white to lavender, sometimes brown spotted above nectary, gen yellow hairy near nectary, nectary not depressed, \pm round, gen densely thick-knobby-yellow hairy. **FR** erect, \pm 5 cm, linear, angled.

Habitat: Meadows and places moist in early spring, 3500-6500 ft.; chaparral, yellow pine forest

Range: San Bernardino Mts. to Tehachapi Mts.; eastern San Luis Obispo Co.

Flowering time: May-July

Distinguishing features: Flower and fruit erect; nectary surface hairy; Stem base bulblet bearing; nectary yellow hairy; bracts opposite.

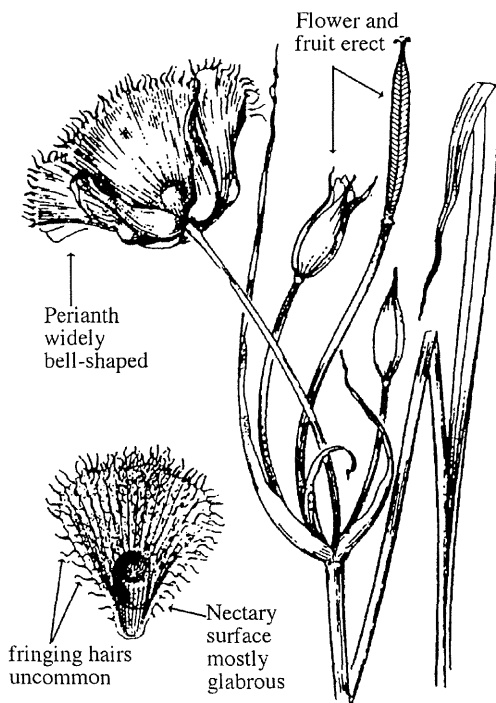
Status: CNPS list: 1B; R-E-D Code: 2-2-3; State/Federal: /C2.



Close-up of *Calochortus plummerae* by M. Elvin.



Habitat of *Calochortus plummerae* by M. Elvin.



CALOCHORTUS PLUMMERAE

Scientific name: *Calochortus plummerae* E. Greene

Common name: Plummer's mariposa lily

Family (Common name): Liliaceae (Lily family)

Synonyms: —

General description: Perennial herb from bulb, bulb coat fibrous.

ST 30-60 cm, slender, gen branched. **LVS:** basal 20-40 cm, withering; cauline 4-17 cm, upper inrolled. **INFL:** fls 2-6, erect; bracts lf-like. **FL:** perianth widely bell shaped; sepals 30-50 mm, long tapered; petals 30-40 mm, pale pink to rose, drying purplish, margin toothed (rarely fringed), long-yellow hairy in wide central band, nectary round, slightly depressed, ± hidden by dense, orange bordering hairs. **FR** erect, 4-8 cm, linear, angled.

Habitat: Dry rocky places, often in brush, below 5000 ft.; coastal sage scrub to yellow pine forest

Range: Santa Monica Mts. to south face of San Gabriel and San Bernardino Mtns., to San Jacinto Mts.

Flowering time: May-July

Distinguishing features: Flower and fruit erect; basal leaf ± withered by flowering time; nectary surface ± glabrous; petal ± pink, not ciliate

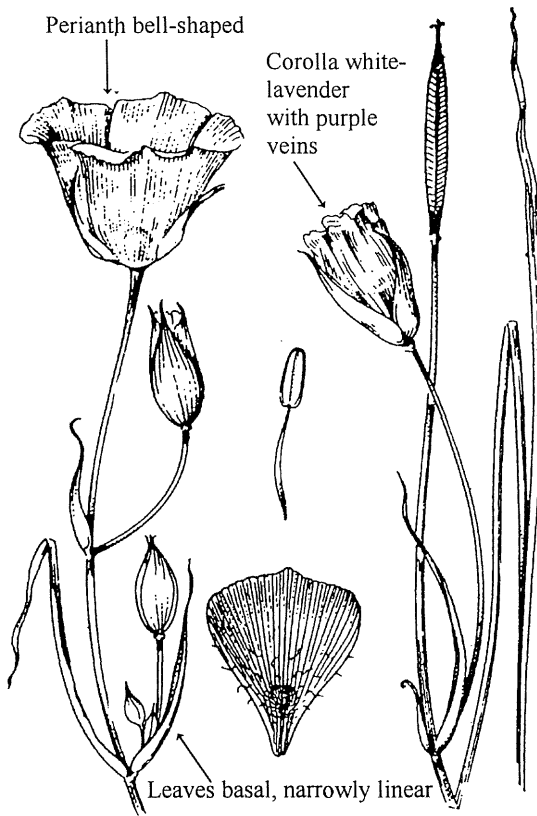
Status: CNPS list: 1B; R-E-D Code: 2-2-3; State/Federal: /C2



Close-up of *Calochortus striatus* by M. Elvin.



Habitat of *Calochortus striatus* by M. Elvin.



CALOCHORTUS STRIATUS

Scientific name: *Calochortus striatus* Parish

Common name: Alkali mariposa lily

Family (Common name): Liliaceae (Lily family)

Synonyms: —

General description: Annual. **ST** erect 1-5 cm tall. **LF** basal, narrowly linear 10-20 cm long, 6-8 mm wide. **FL** perianth bell-shaped; corolla pale white-lavender with purple veins. **FR** erect 4-5 cm long.

Habitat: Alkaline meadows and springs, 2500-4500 ft.; Creosote Bush Scrub.

Range: Western Mojave Desert, western Nevada

Flowering time: April-June

Distinguishing features: Perianth bell-shaped, pale-white to lavender, purple-veined (not spotted as in the closely related *C. flexuosus*, *C. dunnii* and *C. splendens*).

Status: CNPS list: 1B; R-E-D Code: 2-2-2; State/Federal: /C2



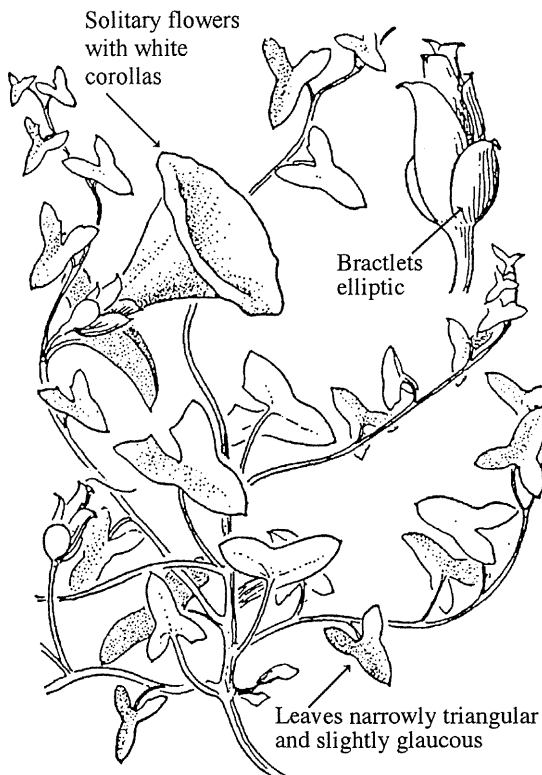
Top Left: Close-up of *Calystegia peirsonii* by O. Mistretta.



Top Right: Flower of *Calystegia peirsonii* by RT Hawke.



Habitat of *Calystegia peirsonii* by O. Mistretta.



CALYSTEGIA PEIRSONII

Scientific name: *Calystegia peirsonii* (Abrams) Brummitt

Common name: Peirson's morning-glory

Family (Common name): Convolvulaceae (Morning-Glory family)

Synonyms: *Convolvulus peirsonii* Abrams

General description: Herbaceous perennial from rhizome. **ST** low-lying or weakly climbing. **LF** narrowly triangular with basal lobes distinctly 2-tipped. **FL** solitary flowers bearing white corollas 25-40 mm long.

Habitat: Dry slopes, 3000-4500 ft.; Creosote Bush Scrub, Joshua Tree Woodland, chaparral.

Range: Northern San Gabriel Mtns, Liebre Mtns, adjacent Mojave Desert (Antelope Valley).

Flowering time: May-June

Distinguishing features: Similar to *C. macrostegia*, but differs in being slightly glaucous, and in having bracts that are oblong to oval, 5-8 mm long, generally attached 1-3 mm below the base of the calyx.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: /C2



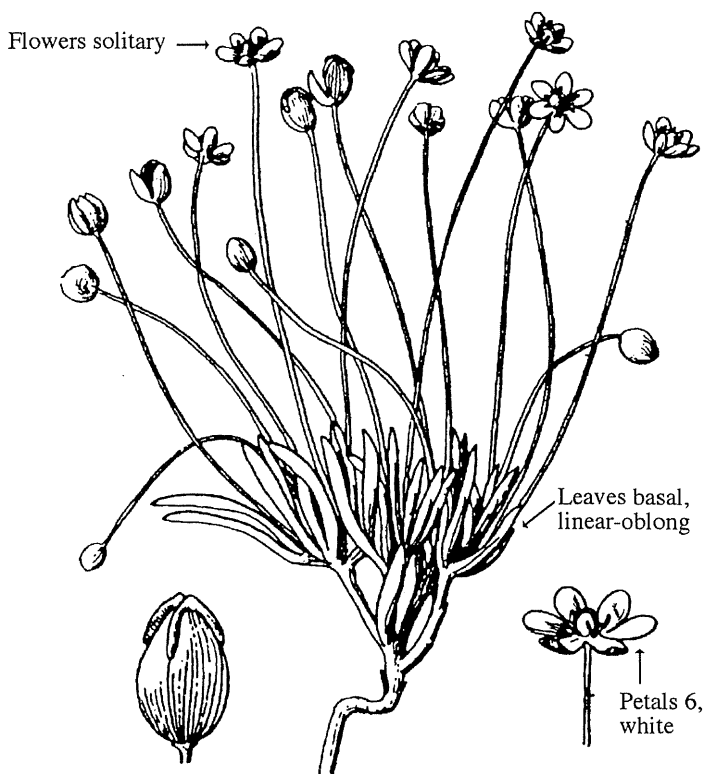
Top Left: Close-up of *Canbya candida* by M. Elvin.



Top Right: Flowers of *Canbya candida* by M. Elvin.



Habitat of *Canbya candida* by M. Elvin.



CANBYA CANDIDA

Scientific name: *Canbya candida* Parry

Common name: Pygmy poppy

Family (Common name): Papaveraceae (Poppy family)

Synonyms: —

General description: Annual. Plant 10-30 mm, tufted, ± glabrous.

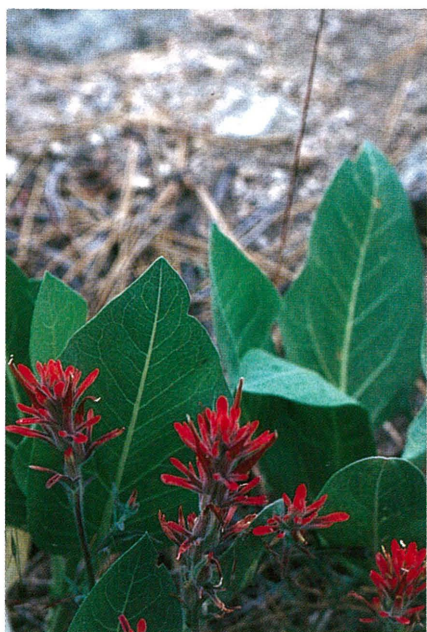
LVS ± basal, linear oblong, entire, 5-9 mm, fleshy. **INFL:** fls solitary, terminal, peduncle 10-20 mm. **FL:** sepals 3, gen brown spotted near base; petals 6, free, 3-5 mm, elliptic, white, persistent after pollination; stamens 6-9, free. **FR** ovate, dehiscent from tip; 2-2.5 mm. **SEEDS** many, shiny brown, 2-2.5 mm.

Habitat: Sandy flats, 2000-4000 ft.; Creosote bush scrub, Joshua tree woodland

Range: western Mojave desert from Bob's Gap to Victorville region

Flowering time: April-May

Status: CNPS list: 1B; R-E-D Code: 2-2-3; State/Federal: none

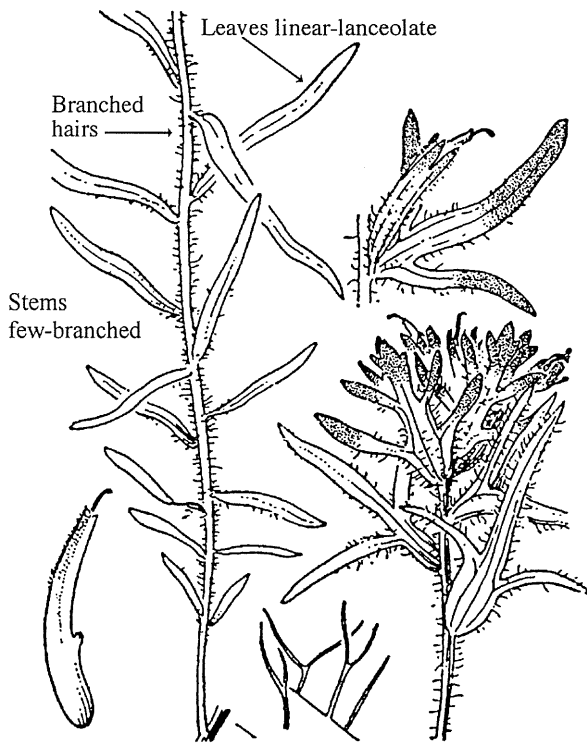


Top Left: Close-up of *Castilleja gleasonii* by O. Mistretta.

Top Right: Inflorescence of *Castilleja gleasonii* by O. Mistretta.



Habitat of *Castilleja gleasonii* by O. Mistretta.



CASTILLEJA GLEASONII

Scientific name: *Castilleja gleasonii* Elmer

Common name: Mt. Gleason Indian-paintbrush

Family (Common name): Scrophulariaceae (Figwort family)

Synonyms: *C. pruinosa* Fernald

General description: Subshrub 30-80 cm tall. **ST** few branched \pm gray with dense hairs. **LF** linear-lanceolate 20-80 mm, tips obtuse. **INFL** 3-20 cm, bracts generally bright red to orange-red **FL** corolla backside puberulent, margins reddish, lower lip dark green. **FR** 8-15 mm.

Habitat: Rocky places, 5000-7100 ft., Yellow Pine Forest about Mt. Gleason, San Gabriel Mts.

Range: San Gabriel Mts.; Chilao/Horse Flats area to Mt. Gleason.

Flowering time: May-June

Distinguishing features: Similar to *C. pruinosa*, but distinguished by differences in the calyx lobes and corolla. Similar to *C. foliolosa*, which also has forked hairs, but differing in the linear-lanceolate leaves and in the longer corolla, along with other technical characters.

Status: CNPS list: 1B; R-E-D Code: 3-2-3; State/Federal: CR/C2



Top Left: Close-up of *Castilleja plagiotoma* by O. Mistretta.

Top Right: Inflorescence of *Castilleja plagiotoma* by RT Hawke.



Habitat of *Castilleja plagiotoma* by O. Mistretta.



CASTILLEJA PLAGIOTOMA

Scientific name: *Castilleja plagiotoma* Gray

Common name: Mohave Indian-paintbrush

Family (Common name): Scrophulariaceae (Figwort family)

Synonyms: —

General description: Perennial 30-60 cm, gray-green herbage becoming \pm maroon. **LF** 20-50 mm \pm linear, lobes 3-5. **INFL** 3-20 cm, bracts have white-woolly lobes. **FL** calyx pale yellow, white-woolly; corolla yellowish, backside puberulent, lower lip pale green. **FR** \pm 10 mm.

Habitat: Dry flats and ridges, 2500-7500 ft.; Sagebrush Scrub, Joshua Tree Woodland, yellow pine woodland, Pinyon-Juniper woodland.

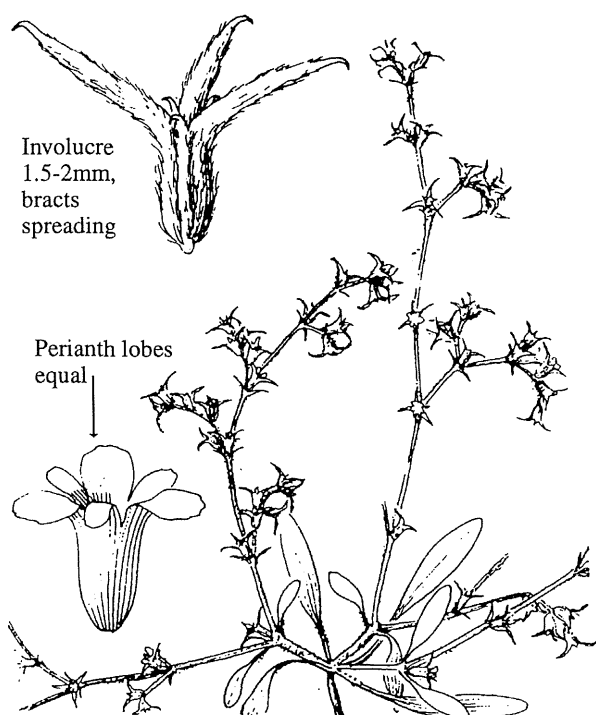
Range: north base of San Bernardino and San Gabriel Mtns. to Piute Mtns. and San Luis Obispo County.

Flowering time: April-June

Distinguishing features: Herbage \pm green, calyces white-woolly; calyx sinuses deeper on sides than in back and front.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

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CHORIZANTHE PARRYI* VAR. *FERNANDINA

Scientific name: *Chorizanthe parryi* S. Watson var. *fernandina* (S. Watson) Jeps.

Common name: San Fernando Valley spineflower

Family (Common name): Polygonaceae (Buckwheat family)

Synonyms: —

General description: Low-growing annual 2-30 cm tall. **ST** several from base, strigose. **LF** 5-40 mm oblanceolate to oblong. **INFL** involucre awns straight **FL** perianth lobes unequal; corolla white sparsely hairy.

Habitat: Dry, sandy places below 2500 ft.; mostly Coastal Sage Scrub.

Range: Historically known from the San Fernando Valley to Orange County and San Diego County.

Distinguishing features: Plant decumbent; involucre 1.5-2 mm, bracts spreading.

Notes: Distinguished from *C. parryi* var. *parryi* in having perianth lobes \pm equal.

Status: CNPS list: 1A, presumed extinct; State/Federal: /C2



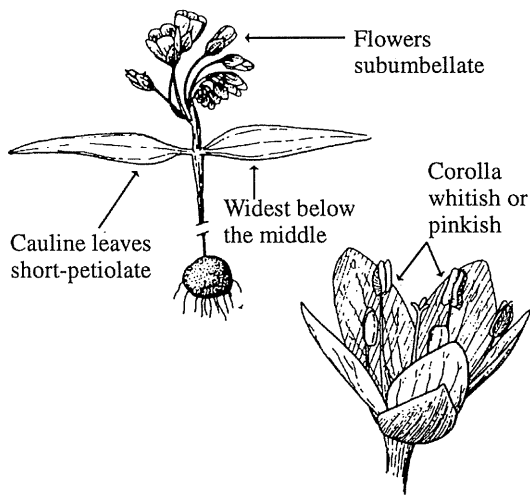
Top Left: Flower of *Claytonia lanceolata* var. *peirsonii* by O. Mistretta.



Top Right: Close-up of *Claytonia lanceolata* var. *peirsonii* by O. Mistretta.



Habitat of *Claytonia lanceolata* var. *peirsonii* by O. Mistretta.



CLAYTONIA LANCEOLATA VAR. *PEIRSONII*

Scientific name: *Claytonia lanceolata* Pursh. var. *peirsonii* Munz & Jtn.

Common name: Peirson's spring beauty

Family (Common name): Portulacaceae (Purslane family)

Synonyms: *C. lanceolata* Pursh.

General description: Perennial herb from a globose corm. **ST** 1-several, erect, 5-15 cm long. **LF** cauline leaves with short petioles, widest below the middle, linear to broadly ovate. **FL** subumbellate, corolla white or pinkish 5-12 mm.

Habitat: Dry ridges, about 8000 ft.; lodgepole pine forest.

Range: Slopes of eastern peaks of San Gabriel Mts.

Flowering time: May-June

Distinguishing features: Cauline leaves, short-petiolate, widest below the middle, 7-12 mm wide; flowers subumbellate.

Status: CNPS list: 1B; R-E-D Code: 3-3-3; State/Federal: /C1

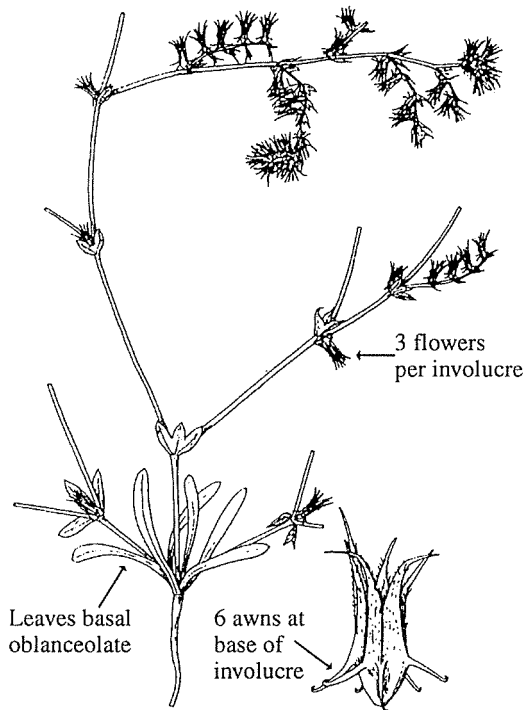
Notes: Much environmental variation; needs study.



Top Left: Inflorescence of *Dodecahema leptoceras* by O. Mistretta.
Top Right: Close-up of *Dodecahema leptoceras* by M. Tommerup.



Habitat of *Dodecahema leptoceras* by M. Tommerup.



DODECAHEMA LEPTOCERAS

Scientific name: *Dodecahema leptoceras* (Gray) Reveal & Hardham

Common name: Slender-horned spineflower

Family (Common name): Polygonaceae (Buckwheat family)

Synonyms: *Centrostegia leptoceras* (A. Gray) S. Watson

General description: Annual, low-growing, prostrate or decumbent. **ST** slender 3-10 cm. **LF** basal, oblanceolate, glabrous. **FL** 3 per involucre, 1.2-2 mm white to pink, hairy, stamens 9.

Habitat: Sandy places, Coastal Sage Scrub.

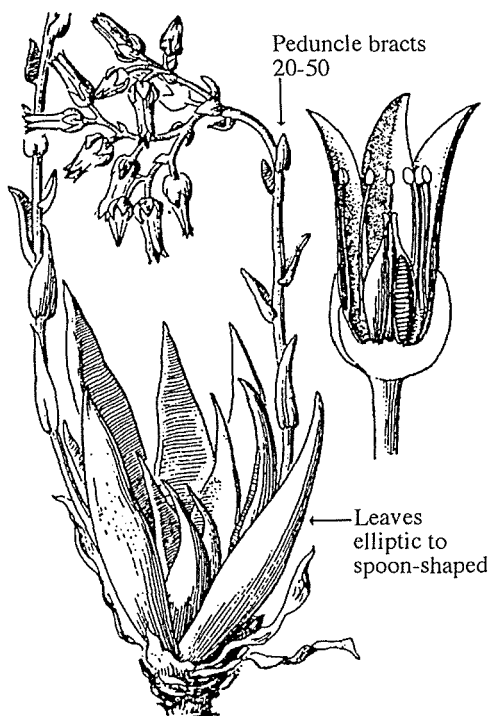
Range: Central and Eastern South Coast Ranges, adjacent foothills of Transverse Ranges, Peninsular Ranges.

Flowering time: April-June

Distinguishing features: 3 flowers per involucre; 6 awns at the base of the involucre.

Status: CNPS list: 1B; R-E-D Code: 3-3-3; State/Federal: CE/FE

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DUDLEYA CYMOSA* VAR. *CREBRIFOLIA

Scientific name: *Dudleya cymosa* (Lemaire) Britton & Rose ssp. *crebrifolia* K. Nakai & Verity

Common name: San Gabriel River Dudleya

Family (Common name): Crassulaceae (Stonecrop family)

Synonyms: —

General description: Perennial herb. **ST:** caudex 1-2 cm wide; branches 0 to rarely few. **LF** 4-10 cm, 20-50 mm wide, elliptic to spoon shaped, rarely glaucous. **INFL:** Peduncle gen 10-30 cm; bracts 20-50, closely spaced; terminal branches 3-15 cm, 2-10(20) fld; pedicel 3-8 mm. **FL:** petals fused 1-1.5 mm, mustard yellow.

Habitat: Granitic slopes; \pm 1300 ft.

Range: Fish Canyon, San Gabriel Mts.

Flowering time: April-July

Distinguishing features: Leaves evergreen, peduncle bracts 20-50, leaf elliptic to spoon shaped

Status: CNPS list: 1B; R-E-D Code: 3-1-3; State/Federal: /C2.

Notes: Difficult to distinguish from other subspecies of *Dudleya cymosa*. Range poorly known.



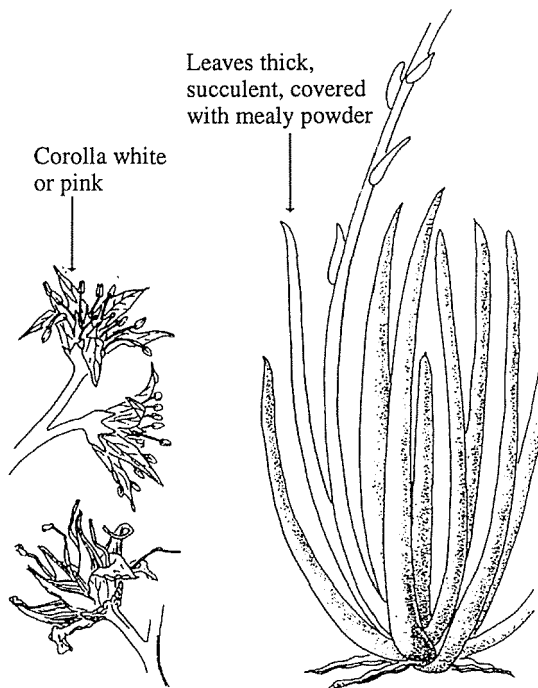
Top Left: Habitat of *Dudleya densiflora* by O. Mistretta.



Top Right: Close-up of *Dudleya densiflora* by O. Mistretta.



Inflorescence of *Dudleya densiflora* (center) and *Dudleya lanceolata* by O. Mistretta.



DUDLEYA DENSIFLORA

Scientific name: *Dudleya densiflora* (Rose) Moran

Common name: San Gabriel Mts. dudleya

Family (Common name): Crassulaceae (Stonecrop family)

Synonyms: —

General description: Perennial from a branched caudex < 2 dm long, 1-2.5 cm wide. **LF** thick, succulent, linear, arranged in a rosette and covered with a waxy or powdery film. **INFL** 3-several flowering stems. **FL** many, corollas white or pink 5-10 mm long. **FR** erect follicles.

Habitat: Rocky cliffs; 800- 2000 ft.; Chaparral.

Range: San Gabriel Mts.

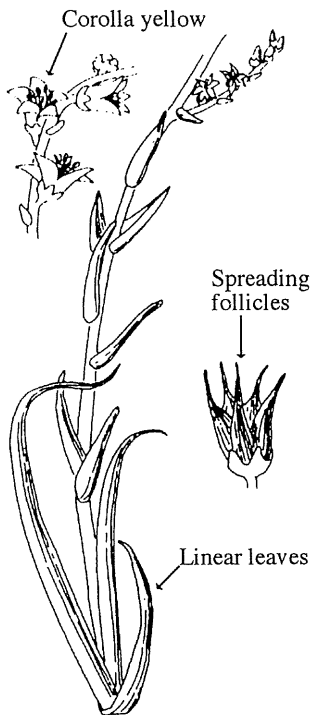
Flowering time: March-July

Distinguishing features: Leaves covered with mealy powder; styles 2-3 mm; pedicel > 2 mm.

Status: CNPS list: 1B; R-E-D Code: 3-2-3; State/Federal: /C2



Close-up of *Dudleya multicaulis* by O. Mistretta.



DUDLEYA MULTICAULIS

Scientific name: *Dudleya multicaulis* (Rose) Moran

Common name: Many-stemmed dudleya

Family (Common name): Crassulaceae (Stonecrop family)

Synonyms: —

General description: Perennial from a corm-like stem 1.5-5 cm long.

LF narrowly linear, cylindrical except at base, 4-15 cm long. **INFL** flowering stems 4-35 cm long. **FL** corollas yellow 5-9 mm long, sometimes with red flecks. **FR** spreading follicles.

Habitat: Dry, stony places on heavy clay soils, below 2000 ft.; Coastal Sage Scrub, Chaparral.

Range: Los Angeles County to San Bernardino, Riverside and Orange Counties and San Onofre Mt., San Diego County.

Flowering time: May-July

Distinguishing features: Linear leaves, slightly narrowed above base, sharply acute at tip, 4-15 cm, base > 4 mm wide; petals fused.

Status: CNPS list: 1B; R-E-D Code: 1-2-3; State/Federal: /C2



Top Left: Close-up of *E. densifolium* var. *sanctorum* by M. Tommerup.

Top Right: Flower of *Eriastrum densifolium* var. *sanctorum* by O. Mistretta.



Habitat of *Eriastrum densifolium* var. *sanctorum* by M. Tommerup.



ERIASTRUM DENSIFOLIUM SSP. SANCTORUM

Scientific name: *Eriastrum densifolium* (Benth.) Mason ssp. *sanctorum* (Mlkn.) Mason

Common name: Santa Ana River woollystar

Family (Common name): Polemoniaceae (Phlox family)

Synonyms: —

General description: Perennial: woody at base. **ST** erect or spreading, sparsely glabrous to woolly. **LF** 10-15 mm, lobes 2-6 densely woolly.

FL funnel-shaped, blue or white, corolla tube > 30 mm.

Habitat: Below 1500 ft.; Coastal Sage Scrub

Range: Santa Ana River Drainage

Flowering time: June-August

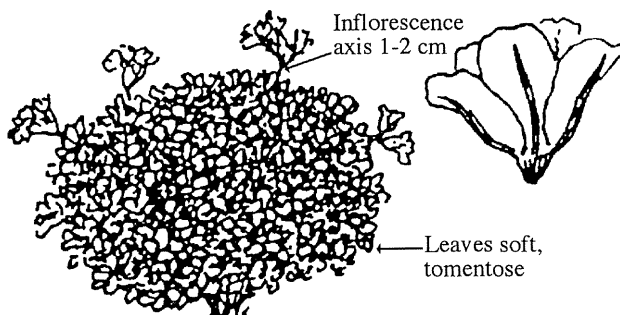
Distinguishing features: Corolla 25-32 mm; plants densely woolly.

Status: CNPS list: 1B; R-E-D Code: 3-3-3; State/Federal: CE/FE

Notes: Not recorded from Angeles National Forest; known from the Lytle Creek drainage.



Close-up of *Eriogonum kennedyi* var. *alpigenum* by RT Hawke.



ERIOGONUM KENNEDYI* VAR. *ALPIGENUM

Scientific name: *Eriogonum kennedyi* S. Watson. var. *alpigenum* (Munz & Jtn.) Munz & Jtn.

Common name: Southern alpine buckwheat

Family (Common name): Polygonaceae (Buckwheat family)

Synonyms: —.

General description: Perennial herb, 5-15 cm; cushions 10-50 cm diam. **LVS** densely clustered on low stsblade 2-4 mm, oblanceolate to elliptic, tip rounded. **INFL:** axis gen 1-2 cm; involucre 2.5-4 mm. **FL:** perianth 1.5-2.5 mm. **FR** 1.8-2 mm

Habitat: dry granitic slopes and ridges, 8750-11,500 ft.

Range: San Bernardino Mtns, San Gabriel Mtns, Mt. Pinos

Flowering time: July-Aug.

Distinguishing features: leaves soft tomentose, oblanceolate to elliptic, tip \pm rounded, 2-4 mm; inflorescence axis 1-2 cm

Status: CNPS list: 1B; R-E-D Code: 2-1-3; State/Federal: none



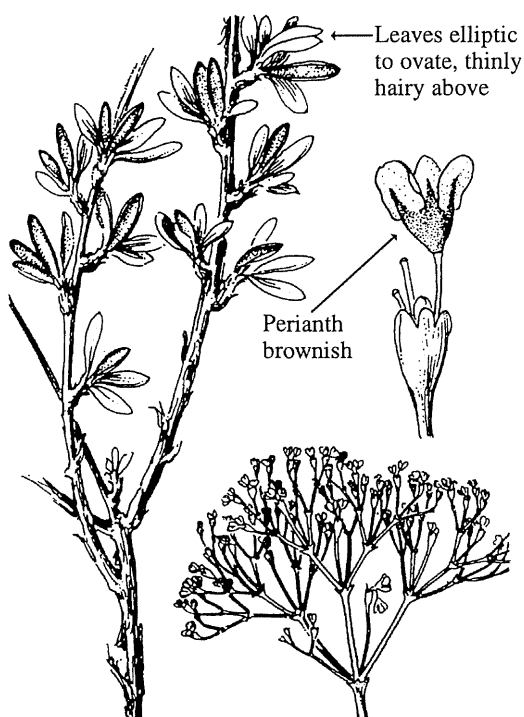
Top Left: Close-up of *E. microthecum* var. *johnstonii* by O. Mistretta.



Top Right: Inflorescence of *E. microthecum* var. *johnstonii* by RT Hawke.



Habitat of *Eriogonum microthecum* var. *johnstonii* by O. Mistretta.



ERIOGONUM MICROTHECUM VAR. *JOHNSTONII*

Scientific name: *Eriogonum microthecum* Nutt. var. *johnstonii* Reveal

Common name: Johnston's buckwheat

Family (Common name): Polygonaceae (Buckwheat family)

Synonyms: —

General description: Perennial. **ST** 6-13 cm tall. **LF** blade elliptic to ovate, generally 5-10 mm, thinly hairy above. **INFL** main branches generally 1 cm. **FL** perianth brownish.

Habitat: Dry, rocky places, 8500-9500 ft., Montane Coniferous Forest.

Range: San Gabriel and San Bernardino Mts.

Flowering time: July-September

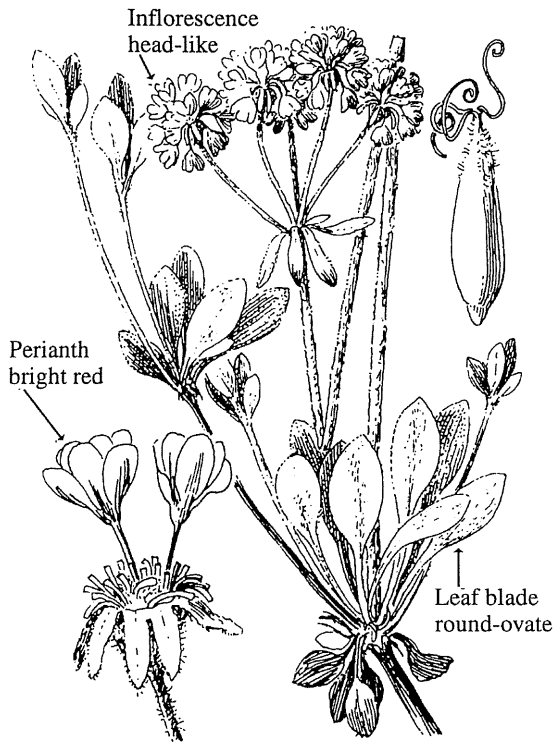
Distinguishing features: Leaves elliptic to ovate; perianth ± brownish.

Status: CNPS list: 1B; R-E-D Code: 3-1-3; State/Federal: /C2

Notes: Difficult to distinguish from *E. microthecum* var. *corymbosoides*



Close-up of *Eriogonum umbellatum* var. *minus* by RT Hawke.



ERIOGONUM UMBELLATUM* VAR. *MINUS

Scientific name: *Eriogonum umbellatum* Torr. var. *minus* Jtn.

Common name: Alpine sulfur-flowered buckwheat

Family (Common name): Polygonaceae (Buckwheat family)

Synonyms: —

General description: Dense, mat-forming perennial from a woody stem. LF blade \pm round-ovate covered with dense white-woolly hairs. INFL often head-like. FL perianth bright red (or yellow when young), conspicuously striped.

Habitat: Dry, stony slopes, 8000-10,000 ft., lodgepole pine forest.

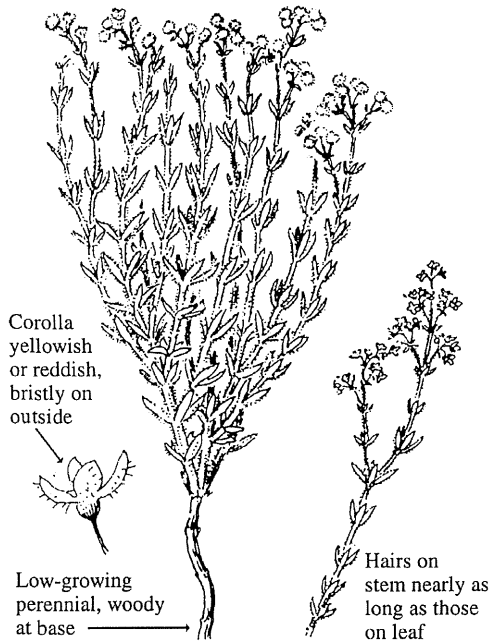
Range: San Gabriel and San Bernardino Mts.

Flowering time: July-September

Distinguishing features: Leaf blade \pm round, very densely tomentose (\pm felt-like) below. Perianth \pm bright red (or yellow when young) generally conspicuously striped.

Status: CNPS list: 4; R-E-D Code: 1-2-3; State/Federal: /C3c

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GALIUM ANGUSTIFOLIUM* SSP. *GABRIELENSE

Scientific name: *Galium angustifolium* Nutt. ssp. *gabrielense* (Munz & Jtn.) Dempster

Common name: San Antonio Canyon bedstraw

Family (Common name): Rubiaceae (Bedstraw family)

Synonyms: *Galium gabrielense* Munz & Jtn

General description: Low-growing perennial, tufted, usually woody at base, herbage glabrous or hairy, dioecious. **ST** 6-30 cm, ridges of stems narrower than surfaces in between. **LF** in whorls of 4, linear /strap-shaped, generally 2-14 mm. **INFL** narrow, few-flowered. **FL** corolla yellowish or reddish, bristly on outside.

Habitat: Dry, rocky places, 4000-8700 ft.; largely Montane Coniferous Forest.

Range: San Gabriel Mts. (about San Antonio Canyon; Los Angeles and San Bernardino Counties).

Flowering time: April-August

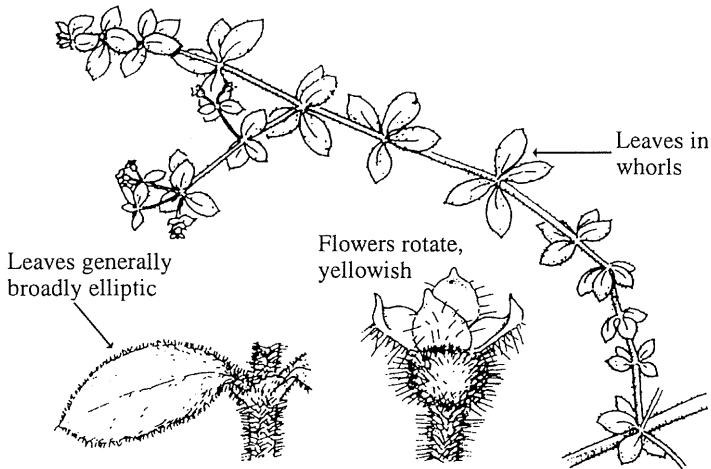
Distinguishing features: Hairs on stem \pm as long as those on leaf; stem ridges generally narrower than surfaces between.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

Notes: Can be easily confused with *G. angustifolium* ssp. *angustifolium* and *nudicaule*.



Close-up of *Galium grande* (foreground) by O. Mistretta.



GALIUM GRANDE

Scientific name: *Galium grande* McClat.

Common name: San Gabriel bedstraw

Family (Common name): Rubiaceae (Bedstraw family)

Synonyms: —

General description: Perennial, sprawling, climbing, dioecious. **ST** generally woody, grayish-hairy. **LF** in whorls of 4, 5-12 mm, elliptic, sparsely covered with short hairs. **FL** rotate, yellowish.

Habitat: Chaparral and Oak Woodland; 2200-3300 ft.

Range: San Gabriel Mts.

Flowering time: January-July

Distinguishing features: Plant sprawls widely on low shrubs; leaves generally broadly elliptic.

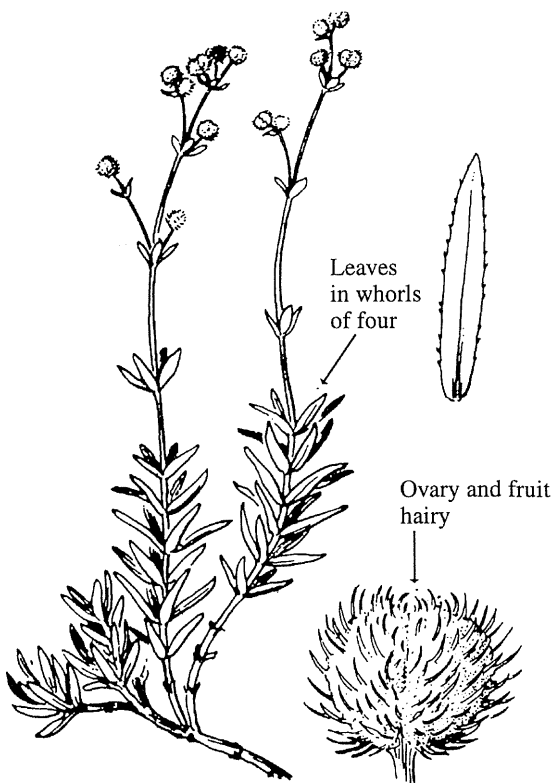
Status: CNPS list: 1B; R-E-D Code: 3-1-3; State/Federal: /C2



Close-up of *Galium jepsonii* by O. Mistretta.



Habitat of *Galium jepsonii* by O. Mistretta.



GALIUM JEPSONII

Scientific name: *Galium jepsonii* Hilend & Howell

Common name: Jepson's bedstraw

Family (Common name): Rubiaceae (Bedstraw family)

Synonyms: —

General description: Perennial from rhizomes, tufted, dioecious. **ST** several, erect, 8-20 cm tall \pm glabrous. **LF** in whorls of 4, dense near base and becoming sparse above, broadly linear. **INFL** panicle \pm leafless. **FL** corolla bell-shaped, divided nearly halfway to base, lobe tips often pink. **FR** nutlet, hairy.

Habitat: Dry, rocky and gravelly places, 7000-8000 ft.; upper Montane Coniferous Forest.

Range: San Gabriel and San Bernardino Mts.

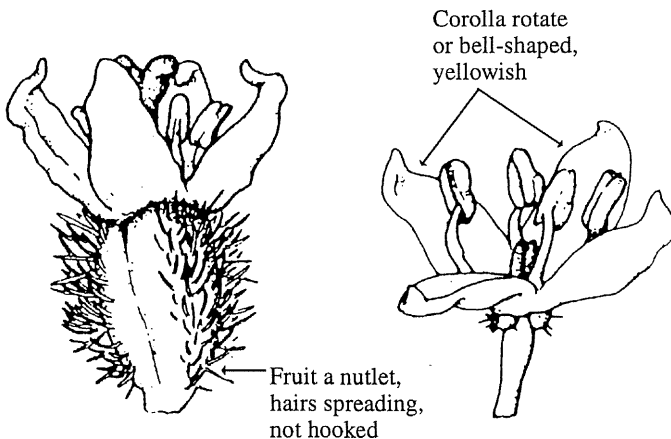
Flowering time: July-August

Distinguishing features: Ovary and fruit with short, curved, ascending hairs; corolla bell-shaped, divided halfway to base (sometimes less).

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Close-up of *Galium johnstonii* by T. Ross.



GALIUM JOHNSTONII

Scientific name: *Galium johnstonii* Dempster & Steb.

Common name: Johnston's bedstraw

Family (Common name): Rubiaceae (Bedstraw family)

Synonyms: *Galium angustifolium* var. *pinetorum* Munz and Jtn.

General description: Perennial, dioecious. **ST** 18-35 cm, glabrous, base woody. **LF** in whorls of 4, 14-30 mm long, generally linear. **INFL** clustered, flowers few. **FL** corolla rotate or \pm bell-shaped, yellowish. **FR** nutlet, hairs spreading, not hooked.

Habitat: Dry slopes; 5000-7500 ft.; Yellow Pine Forest.

Range: San Gabriel and San Bernardino Mts.

Flowering time: June-July

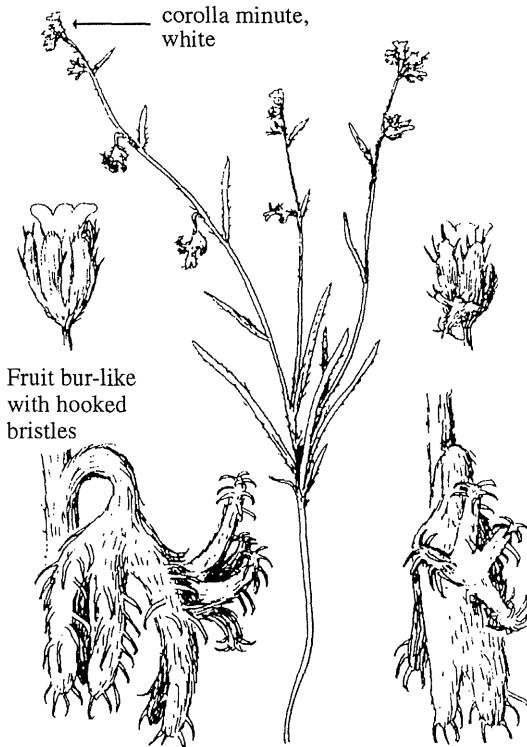
Distinguishing features: Pedicel generally > fruit; upper nodes >> lower; fruit hairs < fruit.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

Notes: Easily confused with *G. angustifolium* vars. *angustifolium*, *gabrielense* and *nudicaule*.



Close-up of *Harpagonella palmeri* by T. Ross.



HARPAGONELLA PALMERI

Scientific name: *Harpagonella palmeri* Gray

Common name: Palmer's grappling hook

Family (Common name): Boraginaceae (Borage family)

Synonyms: —

General description: Annual, loosely spreading. **ST** ascending, strigose, 3-30 cm long. **LF** 1.5-3 cm, strigose, narrowly linear. **INFL** borne on short, stout, twisted pedicels. **FL** minute, white, about 2 mm long. **FR** nutlet, bur-like with hooked bristles.

Habitat: Clay soils, dry slopes and mesas below 1500 ft.; chaparral.

Range: cismontane southern California, from Los Angeles County to Lower California, Santa Catalina Island.

Flowering time: March-April

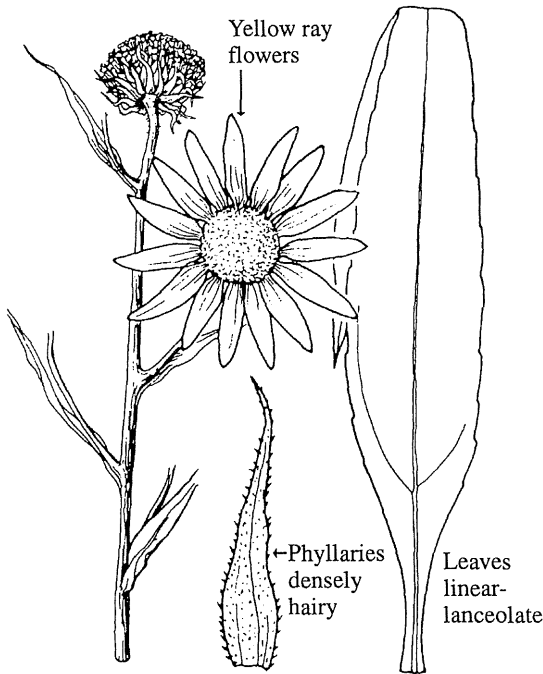
Distinguishing features: Sepals in fruit very unequal, upper 2 >> others, partly fused, arched over 1 nutlet, \pm bur-like, with 5-10 stout spines each with hooked bristles, lower 3 sepals distinct; nutlets 2.

Status: CNPS list: 2; R-E-D Code: 1-2-1; State/Federal: none

Notes: Not recorded from Angeles National Forest, but likely to occur.



Habitat of *Helianthus nuttallii* var. *parishii* by O. Mistretta.



HELIANTHUS NUTTALLII* SSP. *PARISHII

Scientific name: *Helianthus nuttallii* Torrey & Gray ssp. *parishii* (Gray) Heiser

Common name: Los Angeles sunflower

Family (Common name): Asteraceae (Sunflower family)

Synonyms: —

General description: Herbaceous perennial to 4 m tall. **ST** erect, glabrous or hairy. **LF** linear lanceolate and covered with short stiff hairs, up to 15 cm long, 15 mm wide. **INFL** loose cluster. **FL** 12-20 yellow ray flowers; numerous disk flowers with yellow lobes.

Habitat: Moist meadows at about 1000-4000 ft.

Range: Los Angeles, San Bernardino and Orange Counties

Flowering time: August-October

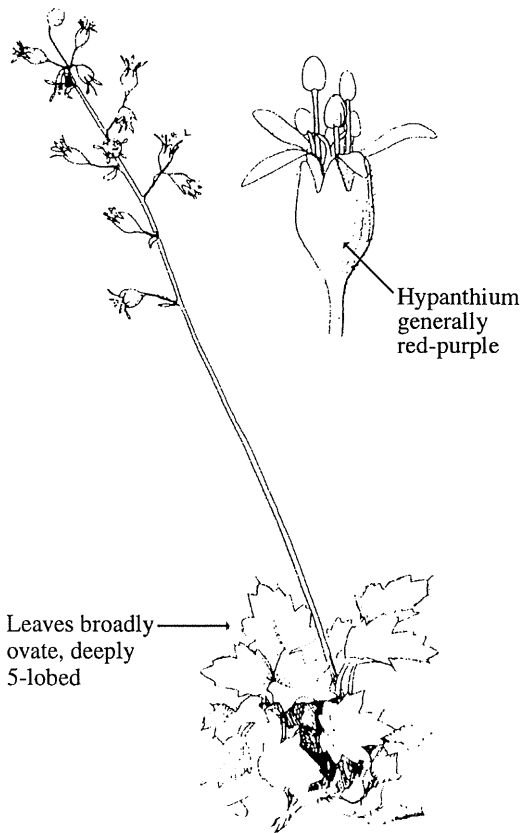
Distinguishing features: Phyllaries densely hairy; leaf blade finely tomentose below.

Status: CNPS list: 1A, presumed extinct; R-E-D Code: ; State/Federal: /C1*

Notes: Last seen in 1937



Close-up of *Heuchera abramsii* by O. Mistretta.



HEUCHERA ABRAMSII

Scientific name: *Heuchera abramsii* Rydb.

Common name: Abram's alumroot

Family (Common name): Saxifragaceae (Saxifrage family)

Synonyms: *Heuchera rubescens* var. *abramsii* (Rydb.) M.G. Stewart.

General description: Perennial herb with stout caudex or rhizome. **LF** broadly ovate < 15 mm, deeply 5-lobed. **INFL** panicle-like, 5-15 cm, densely flowered. **FL**: petals white, stamens < calyx lobes.

Habitat: At 9000-10,000 ft.; upper Montane Coniferous Forest.

Range: San Gabriel Mts.

Flowering time: July-August

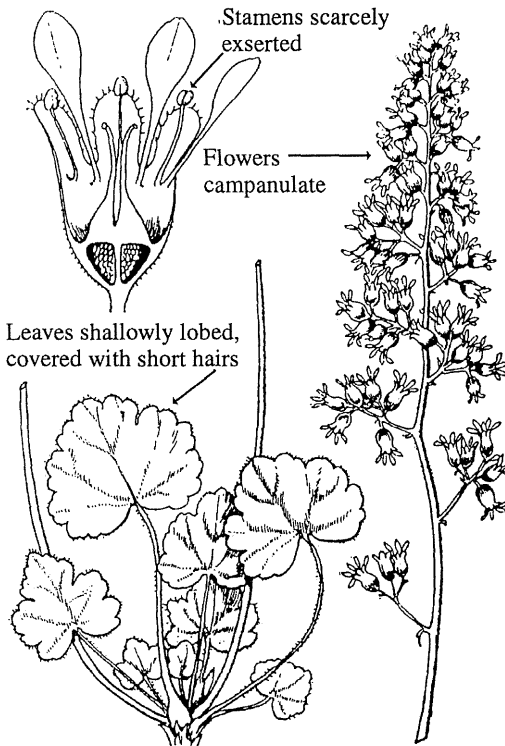
Distinguishing features: Glands of inflorescence \pm sessile; leaf blades generally > 15 mm, generally broadly ovate, \pm deeply lobed.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

Notes: Easily confused with *H. elegans*.



Close-up of *Heuchera elegans* by O. Mistretta.



HEUCHERA ELEGANS

Scientific name: *Heuchera elegans* Abrams

Common name: Urn-flowered alumroot

Family (Common name): Saxifragaceae (Saxifrage family)

Synonyms: *Heuchera rubescens* var. *elegans* (Abrams) Jepson

General description: Perennial herb from caudex or rhizome. **LF** 15-35 mm wide, shallowly lobed, petioles covered with short stiff hairs. **FL** 4-7 mm, campanulate, calyx lobes unequal, stamens scarcely exerted, hypanthium pink to rose, petals white.

Habitat: Rocky areas around 4000-8500 ft.

Range: San Gabriel Mts.

Flowering time: May-June

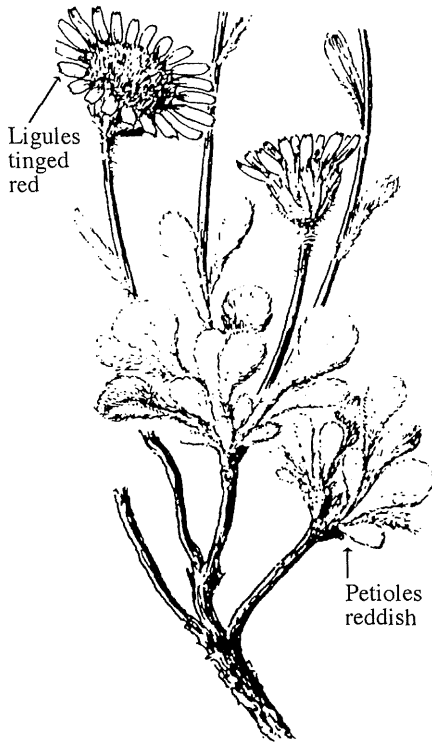
Distinguishing features: Differs from *H. abramsii* in having flowers villous hirsute and petioles more or less hirsute

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

Notes: Easily confused with *H. abramsii*.



Close-up of *Hulsea vestita* ssp. *gabrielensis* by RT Hawke.



HULSEA VESTITA SSP. *GABRIELENSIS*

Scientific name: *Hulsea vestita* Gray ssp. *gabrieleensis* Wilken

Common name: San Gabriel Mtns. hulsea

Family (Common name): Asteraceae (Sunflower family)

Synonyms: —

General description: Perennial herb, gen < 5 dm. **STS** gen leafy in lower 1/2-1/3. **LVS:** basal < 8 cm, 1-3 cm wide; spoon-shaped, ± scalloped, woolly above; cauline few; petioles gen < blade, ± red; **INFL:** heads < 15 mm, < 12 mm wide; bracts lanceolate to ovate, glandular, soft hairy to barely woolly; Phyllaries 8-11 mm, oblong to obovate, acuminate, hairy, tips red tinged. **RAY FLS:** 9-32, 6-8 mm, red tinged. **DISK FLS:** corollas yellow to orange

Habitat: Montane forest; 4000-9300 ft.

Range: Mt. Pinos; San Gabriel Mountains

Flowering time: May-July

Distinguishing features: Petioles ± reddish; stem gen < 5 dm; ligules ± red-tinged.

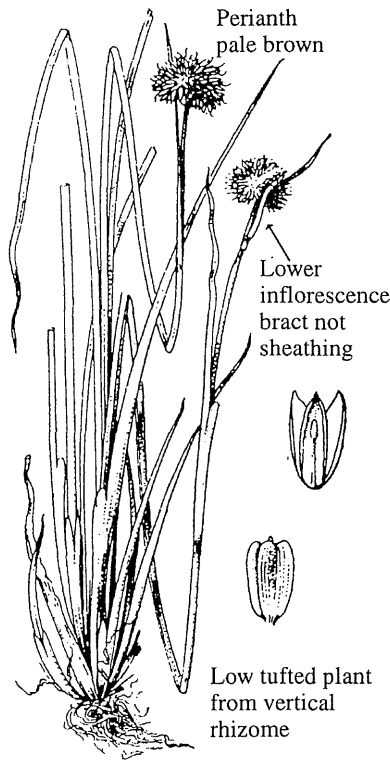
Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none.



Close-up of *Juncus duranii* by O. Mistretta.



Habitat of *Juncus duranii* by O. Mistretta.



JUNCUS DURANII

Scientific name: *Juncus duranii* Ewan

Common name: Duran's rush

Family (Common name): Juncaceae

Synonyms: *Juncus mertensianus* Bong. var. *duranii* (Ewan) F.J. Herm.

General description: Perennial. Low tufted plant from a vertical rhizome. **ST** slender \pm flat 1-2 dm high. **LF** attached near base, 7-15 cm long. **INFL** lowest bract > inflorescence. **FL** perianth segments pale-brown, 3 mm long, anthers 6 equal to or slightly longer than filaments.

Habitat: Wet places, 6000-8300 ft.; Montane Coniferous Forest.

Range: San Gabriel and San Bernardino Mts.

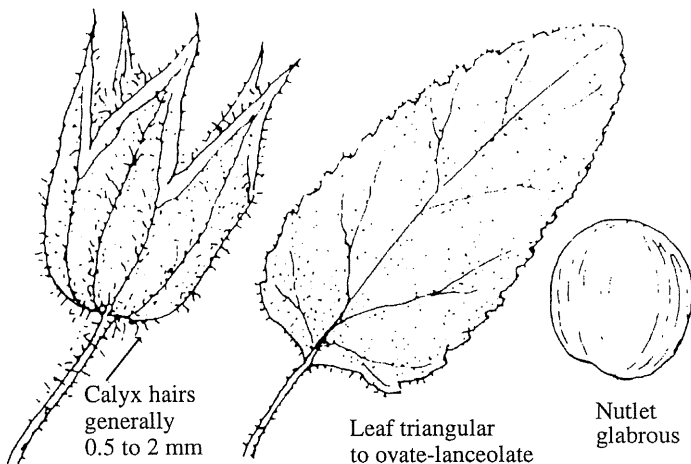
Flowering time: July-August

Distinguishing features: Lower inflorescence bract not sheathing, narrow; perianth brown, stiff.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Close-up of *Lepechinia fragrans* by O. Mistretta.



LEPECHINIA FRAGRANS

Scientific name: *Lepechinia fragrans* (Greene) Epl.

Common name: Fragrant pitcher sage

Family (Common name): Lamiaceae (Mint family)

Synonyms: —

General description: Aromatic shrub to < 2 m high. **ST** erect, \pm square. **LF** triangular to ovate-lanceolate, margins serrate to entire. **FL** solitary in upper axils, corolla white to pale purplish, 2.5-3.5 cm long. **FR:** nutlets less than or equal to 4, glabrous.

Habitat: In canyons below 4400 ft.; Chaparral.

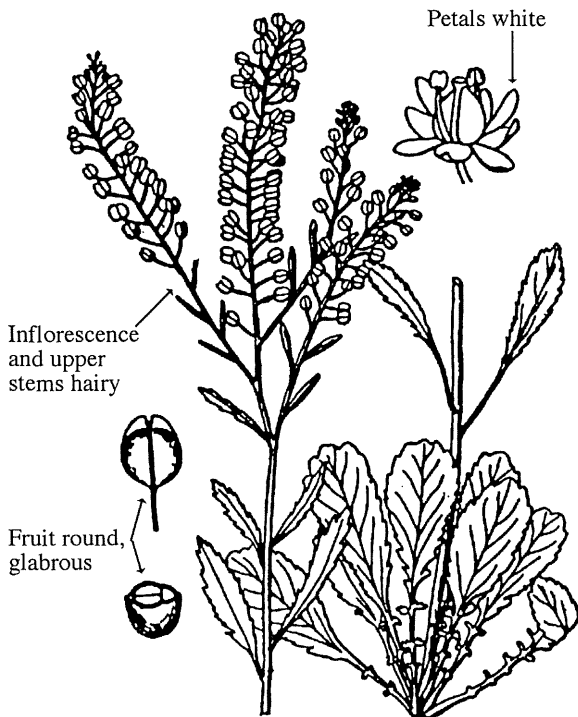
Range: San Gabriel and Santa Monica Mts.; Santa Cruz, Santa Rosa and Santa Catalina Islands

Flowering time: March-May

Distinguishing features: Calyx hairs generally 0.5-2 mm, lobes lanceolate, generally less than or equal to tube.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

This plate is missing.



LEPIDIUM VIRGINICUM* VAR. *ROBINSONII

Scientific name: *Lepidium virginicum* L. var. *robinsonii* (Thell.) Hitchc.

Common name: Robinson's pepper grass

Family (Common name): Brassicaceae (Mustard family)

Synonyms: —

General description: Annual herb. **ST** gen 1-2 dm; hairs dense, pointed. **LVS:** cauline divided or lobed, segments narrow, 1-2 mm wide. **INFL:** pedicel \pm flat, gen \pm winged, hairy. **FL:** sepals \pm 1 mm; petals 1-2(3) mm, obovate, white; stamens 2(4). **FR** 2.5-4 mm, \pm round, glabrous; notch shallow, gen $>$ style.

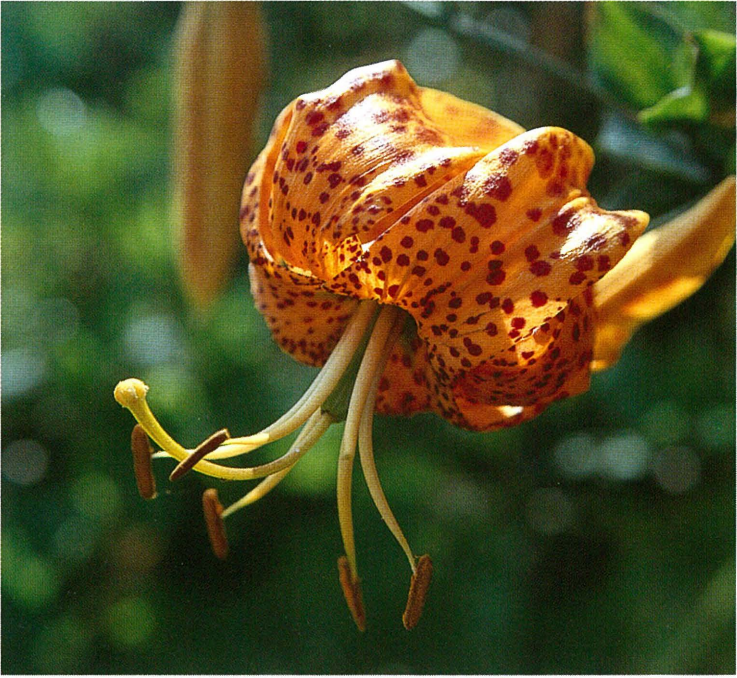
Habitat: Coastal Sage Scrub, Chaparral.

Range: Los Angeles County south to Baja California

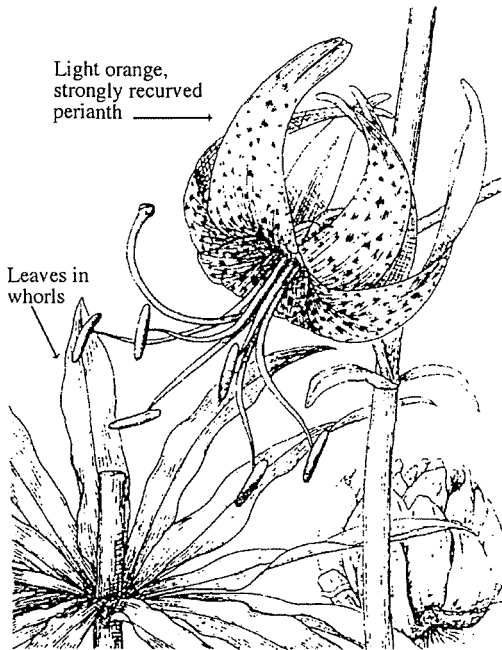
Flowering time: January- April

Distinguishing features: Inflorescence and upper stems hairy, gen 1-2 dm; cauline leaves divided or lobed.

Status: CNPS list: 1B; R-E-D Code: 3-2-2; State/Federal: none



Close-up of *Lilium humboldtii* ssp. *ocellatum* by RT Hawke.



LILIAM HUMBOLDTII SSP. *OCCELLATUM*

Scientific name: *Lilium humboldtii* Roezl. & Leichtl. ssp. *ocellatum* (Kellogg) Thorne

Common name: Ocellated Humboldt lily

Family (Common name): Liliaceae (Lily family)

Synonyms: *Lilium humboldtii* Roezl. & Leichtl. var. *ocellatum* (Kellogg) Elwes.

General description: Perennial herb from bulb, < 3m. **ST** sometimes brown-purple. **LVS** in 4-9 whorls, gen ascending, 4-15 cm, gen \pm oblanceolate; margin gen wavy. **INFL:** fls 1-40, pendant. **FL:** \pm widely bell shaped, not fragrant; perianth segments 5-10 cm, 75% strongly recurved, yellow or light orange, spots margined lighter red (toward tip larger, with wider margins; pollen \pm tan or tan-yellow. **FR** 2-6 cm, 1.8-3.5 dm diam, ribbed.

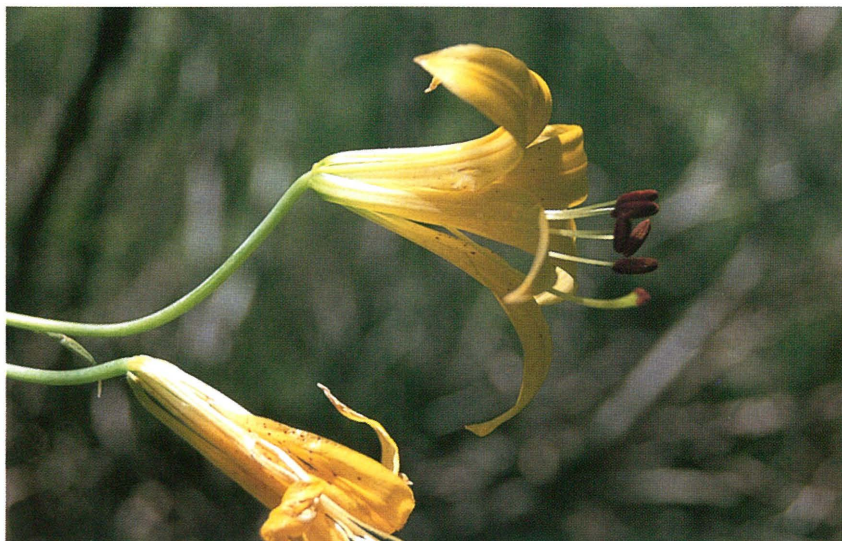
Habitat: gravelly soil, gulleys and canyons below 3000 ft.; chaparral, Southern Oak Woodland.

Range: Santa Barbara County to San Jacinto Mts. and Santa Ana Mts., Santa Cruz Island

Flowering time: June-July

Distinguishing features: Light orange, strongly recurved, unscented perianth; leaves in distinct whorls.

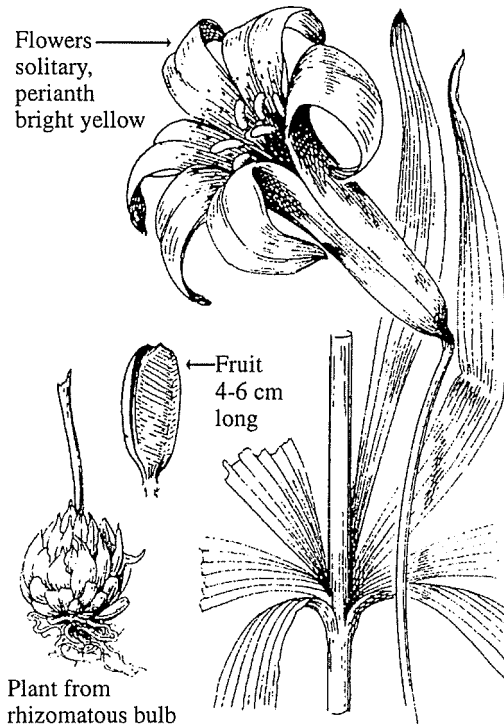
Status: CNPS list: 4; R-E-D Code: 1-2-3; State/Federal: /C2.



Close-up of *Lilium parryi* by O. Mistretta.



Habitat of *Lilium parryi* by O. Mistretta.



LILIUM PARRYI

Scientific name: *Lilium parryi* S. Watson

Common name: Lemon lily

Family (Common name): Liliaceae (Lily family)

Synonyms: —

General description: Plant < 2.5 m tall from a rhizomatous bulb. **LF** scattered in 1-8 whorls. **FL** solitary 1-31 per inflorescence, slightly bilateral, trumpet-shaped; perianth lemon-yellow sometimes with maroon spots; stamens about as long as perianth and pale-magenta brown. **FR** 4-6 cm long.

Habitat: Springy places and wet banks; 4000-9000 ft.; Montane Coniferous Forest.

Range: San Gabriel Mts. to San Diego County; Arizona

Flowering time: July-August

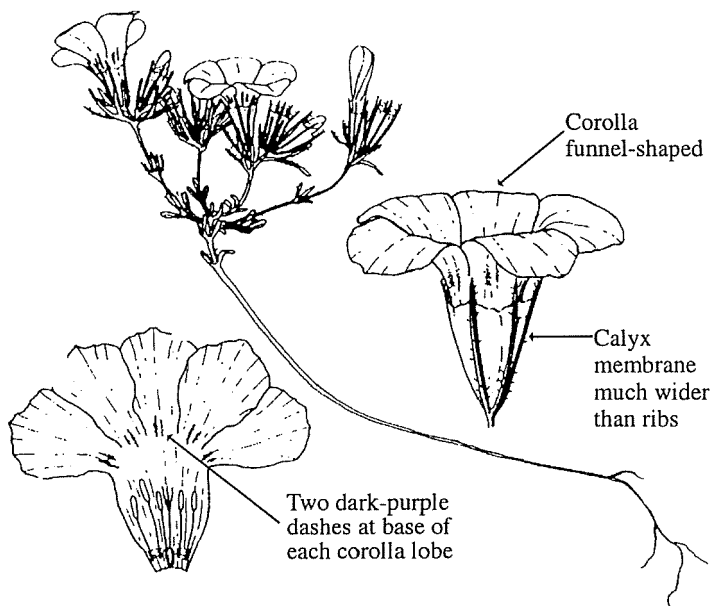
Distinguishing features: Perianth bright yellow, fragrant, segments 7-11 cm.

Status: CNPS list: 1B; R-E-D Code: 1-2-2; State/Federal: /C2

Notes: Rare on the Forest due to horticultural collecting in early 1900's.



Close-up of *Linanthus concinnus* by RT Hawke.



LINANTHUS CONCINNUS

Scientific name: *Linanthus concinnus* Mlkn.

Common name: San Gabriel linanthus

Family (Common name): Polemoniaceae (Phlox family)

Synonyms: —

General description: Low-growing tufted annual 1-3 cm wide. **LF** opposite or \pm alternate, linear and divided into 3-5 lobes 8-15 mm long; broad hyaline membrane extending $>$ halfway along length of leaves. **INFL** densely crowded. **FL** corolla funnel-shaped, white with 2 dark purple dashes at base of each corolla lobe.

Habitat: Dry, rocky slopes; 5000-8500 ft.; Montane Coniferous Forest.

Range: San Gabriel Mts.

Flowering time: May-July

Distinguishing features: Calyx membrane much wider than ribs.

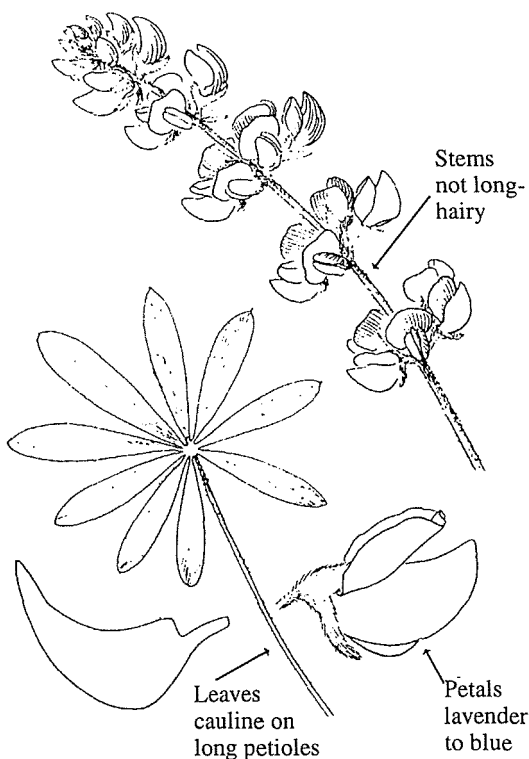
Status: CNPS list: 1B; R-E-D Code: ?-2-3; State/Federal: none



Inflorescence of *Lupinus elatus* by O. Mistretta.



Close-up of *Lupinus elatus* by O. Mistretta.



LUPINUS ELATUS

Scientific name: *Lupinus elatus* Jtn.

Common name: Silky lupine

Family (Common name): Fabaceae (Legume family)

Synonyms: —

General description: Perennial herb 5-9 dm tall, herbage silvery-silky-woolly. **ST** erect. **LF** cauline on long (2-4 cm) petioles; leaflets silvery-silky above, duller beneath. **INFL** spike-like. **FL** petals pale lavender to pale blue, banner has a pale-yellowish patch. **FR** 2-3 cm long.

Habitat: Dry slopes among pines; 6000-8700 ft.; Montane Coniferous Forest.

Range: Mt. Pinos and San Gabriel Mts.

Flowering time: June-August

Distinguishing features: Petals pale lavender to pale blue; stems not long-hairy.

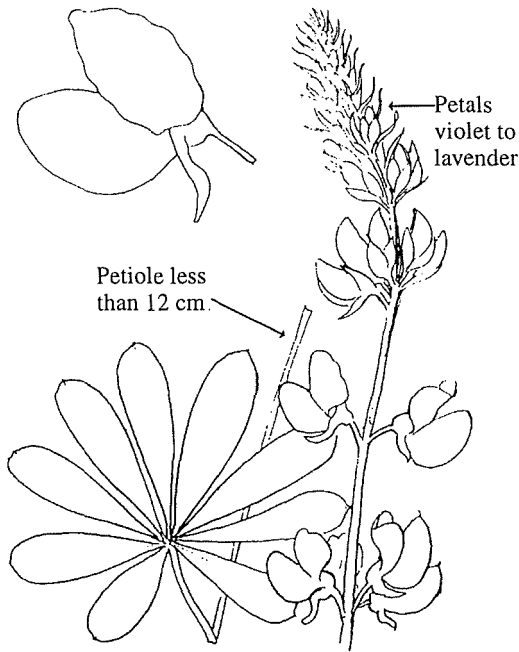
Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Inflorescence of *Lupinus excubitus* var. *johnstonii* by O. Mistretta.



Close-up of *Lupinus excubitus* var. *johnstonii* by O. Mistretta.



LUPINUS EXCUBITUS VAR. *JOHNSTONII*

Scientific name: *Lupinus excubitus* M. E. Jones var. *johnstonii* C. P. Smith

Common name: Interior bush lupine

Family (Common name): Fabaceae (Legume family)

Synonyms: —

General description: Subshrub 1-3 dm high. **ST** basal stems woody, branched. **LF** generally clustered near base; leaflets covered with soft white hairs. **INFL** spike-like, 6-12 cm tall. **FL** petals violet to lavender with bright yellow patch on back of banner.

Habitat: Gravelly and rocky places; Yellow Pine Forest, 5500-7000 ft.

Range: San Gabriel Mtns., Liebre Mtn., and possibly Mt Pinos and Frazier Mtn.

Flowering time: May-July

Distinguishing features: Petiole < 12 cm.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

Notes: Easily confused with *L. excubitus* vars. *austromontana* and *hallii*.

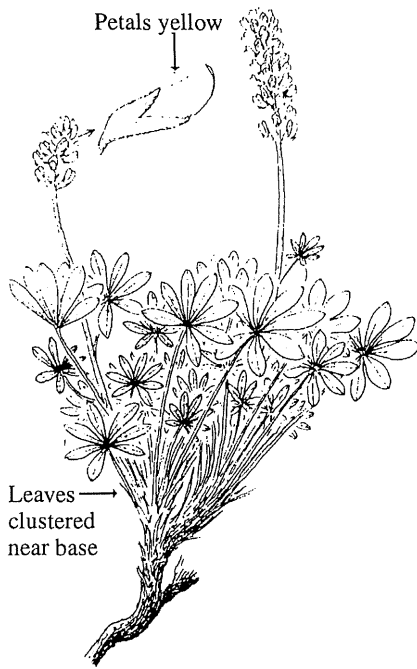


Top Left: Close-up of *Lupinus peirsonii* by RT Hawke.

Top Right: Inflorescence of *Lupinus peirsonii* by O. Mistretta.



Habitat of *Lupinus peirsonii* by O. Mistretta.



LUPINUS PEIRSONII

Scientific name: *Lupinus peirsonii* Mason

Common name: Peirson's lupine

Family (Common name): Fabaceae (Legume family)

Synonyms: —

General description: Herbaceous perennial. **ST** erect, branched from just above ground 3-6 dm tall. **LF** cauline, clustered at base, \pm fleshy.

INFL loose-clustered raceme. **FL** petals yellow, back of banner \pm hairy.

FR 3-4 cm long, covered with silky hairs.

Habitat: Loose, gravelly and rocky slopes; 4000-8000 ft.; Pinyon-Juniper Woodland, Joshua Tree Woodland, Yellow Pine Woodland.

Range: Desert slopes of San Gabriel and Tehachapi Mts.

Flowering time: April-May

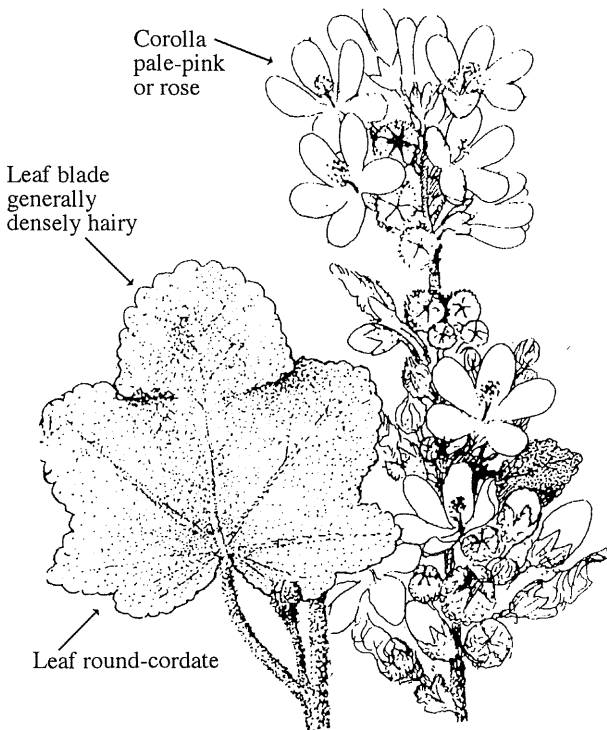
Distinguishing features: Leaves clustered near base; petals yellow.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: /C3c

Right: Close-up of
Malacothamnus davidsonii
by O. Mistretta.

Bottom: Habitat of
Malacothamnus davidsonii
by O. Mistretta.





MALACOTHAMNUS DAVIDSONII

Scientific name: *Malacothamnus davidsonii* (Rob.) Greene

Common name: Davidson's bush mallow

Family (Common name): Malvaceae (Mallow family)

Synonyms: —

General description: Perennial shrub to 5 m tall. **ST** erect, covered with dense stellate hairs. **LF** round-cordate, 3-7 lobed. **INFL** dense to well-separated panicles 2.5-4.5 dm long. **FL** corolla pale-pink or rose; styles and filaments tending toward violet.

Habitat: Sandy washes and flats; Coastal Sage Scrub.

Range: San Fernando Valley, Western San Gabriel Mts., Los Angeles County

Flowering time: June-September

Distinguishing features: Leaf blade 5-20 cm, thick, upper surface generally densely hairy, tawny, sinuses closed, lobes overlapping; branches generally stout.

Status: CNPS list: 1B; R-E-D Code: 2-2-3; State/Federal: none

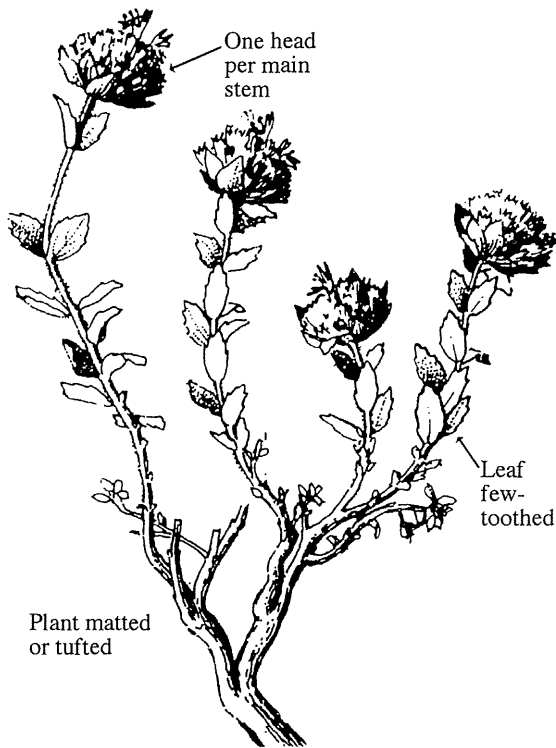
Notes: easily confused with *M. marrubioides* and *M. orbiculatus*.



Close-up of *Monardella cinerea* by RT Hawke.



Habitat of *Monardella cinerea* by O. Mistretta.



MONARDELLA CINEREA

Scientific name: *Monardella cinerea* Abrams

Common name: Gray monardella

Family (Common name): Lamiaceae (Mint family)

Synonyms: —

General description: Low-growing perennial 0.5-1 dm high, herbage canescent. **LF** narrowly to broadly ovate 5-12 mm long. **INFL** head, 1 per stem. **FL** bracts reddish-purple; corolla rose-purple; stamens extending \pm slightly above petals.

Habitat: Dry slopes; 6000-10,000 ft.; Montane Coniferous Forest.

Range: eastern San Gabriel Mts.

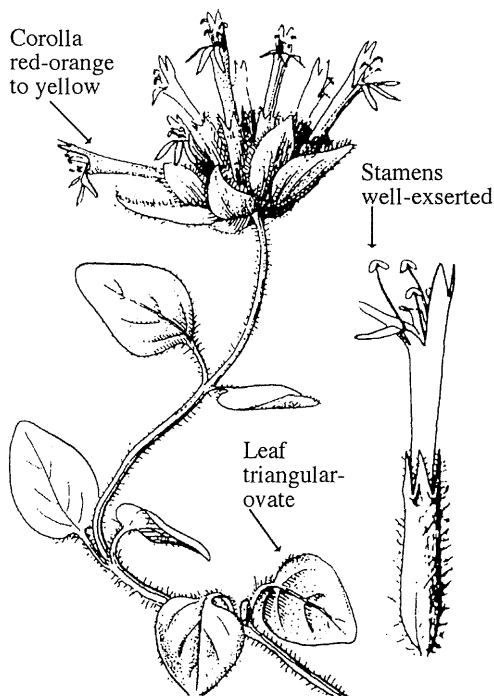
Flowering time: July-August

Distinguishing features: Leaf 5-10 mm, generally few-toothed; head 1 per main stem; plant matted or tufted.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Close-up *Monardella macrantha* ssp. *hallii* by W. Wisura.



MONARDELLA MACRANTHA* SSP. *HALLII

Scientific name: *Monardella macrantha* Gray ssp. *hallii* Abrams

Common name: Hall's monardella

Family (Common name): Lamiaceae (Mint family)

Synonyms: —

General description: Low-growing perennial 1-3 (rarely 5) dm. **ST** branched, covered with fine, soft hairs. **LF** triangular-ovate sparsely to densely hairy. **FL** corolla 3-4.5 cm long, frequently yellowish; stamens well-exserted.

Habitat: Dry slopes and ridges, 2500-6000 ft.; Chaparral, Yellow Pine Forest.

Range: San Gabriel, San Bernardino and Peninsular Ranges.

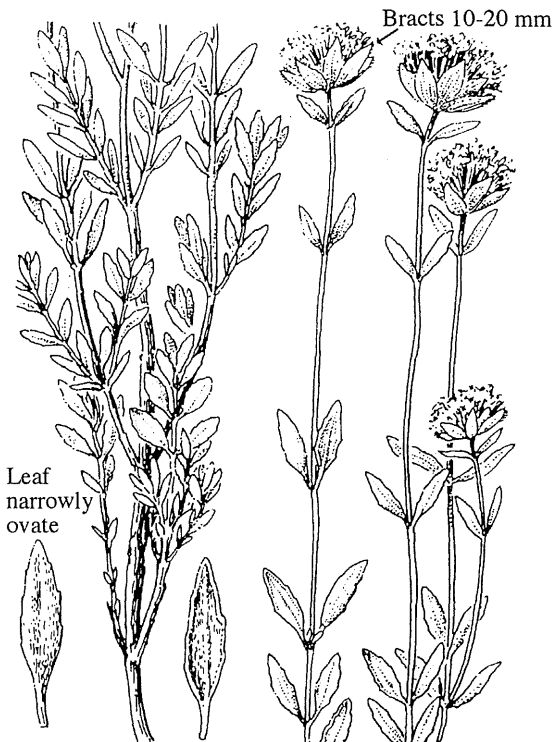
Flowering time: June-August

Distinguishing features: Corolla 35-45 mm, red-orange to yellow, tube funnel-shaped, 1.5-3 mm wide at top, lobes ascending; calyx 20-25 mm; anthers 1.2-1.5 mm.

Status: CNPS list: 1B; R-E-D Code: 1-1-3; State/Federal: /C3c



Monardella viridis ssp. *saxicola* by G. Allan.



MONARDELLA VIRIDIS* SSP. *SAXICOLA

Scientific name: *Monardella viridis* Jeps. ssp. *saxicola* (Jtn.) Ewan

Common name: Rock monardella

Family (Common name): Lamiaceae (Mint family)

Synonyms: *Monardella saxicola* Jtn.

General description: Subshrub from rhizomes (slightly woody at base), 1-3 dm high. Herbage covered with fine, short hairs. **LF** narrowly ovate 10-60 mm, entire. **INFL** head, > 20 mm wide. **FL** corolla purple to lavender; stamens well exserted.

Habitat: Dry, rocky places, 1700-6000 ft.; Chaparral, Yellow Pine Forest.

Range: San Gabriel Mts.

Flowering time: June-September

Distinguishing features: Head > 20 mm wide; bracts generally 10-20 mm.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: /C3c

Right: Close-up of
Muhlenbergia californica by
O. Mistretta.
Bottom: Habitat of
Muhlenbergia californica by
O. Mistretta.





MUHLENBERGIA CALIFORNICA

Scientific name: *Muhlenbergia californica* Vasey

Common name: California muhly

Family (Common name): Poaceae (Grass family)

Synonyms: —

General description: Perennial from rhizomes. **ST** 3-7 dm. **LF** blade 4-16 cm, flat. **INFL** 5-13 cm \times 2 cm wide, branches ascending to erect, densely flowered. **FL** glumes 2.5-4 mm \pm = lemma, lower half of lemma short-soft hairy.

Habitat: Wet places, often on alkaline seeps, up to 7000 ft.; Coastal Sage Scrub, Chaparral, Yellow Pine Forest.

Range: San Gabriel Mts., San Bernardino Mts., formerly San Bernardino Valley.

Flowering time: July-September

Distinguishing features: Glumes 2.5-4 mm, \pm = lemma; lower half of lemma short-soft-hairy.

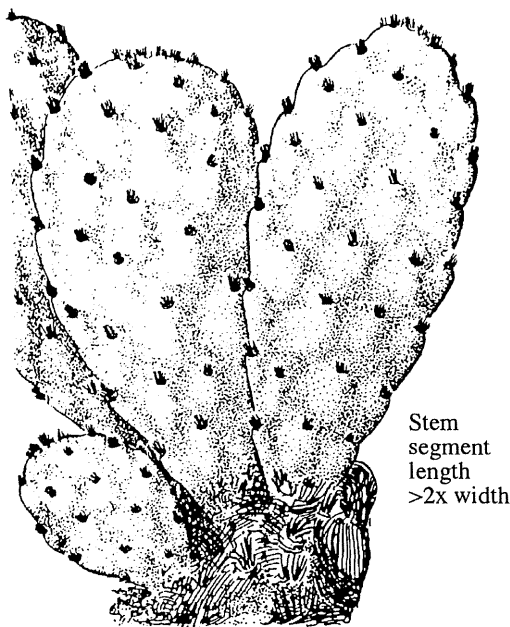
Status: CNPS list: 1B; R-E-D Code: 2-2-3; State/Federal: None



Close-up of *Opuntia basilaris* var. *brachyclada* by O. Mistretta.



Habitat of *Opuntia basilaris* var. *brachyclada* by O. Mistretta.



OPUNTIA BASILARIS* VAR. *BRACHYCLADA

Scientific name: *Opuntia basilaris* Engelm. & Bigel. var. *brachyclada* (Griffiths) Munz

Common name: Short-joint beavertail

Family (Common name): Cactaceae (Cactus family)

Synonyms: —

General description: Perennial. **ST** low and spreading 7-40 cm; segments slightly flattened and erect 5-21. **FL** inner perianth pink-magenta; filaments deep magenta-red. **FR** dry, many-spined 1.5-2 cm long.

Habitat: Dry slopes; 4000-7500 ft.; Joshua Tree Woodland, Pinyon Juniper Woodland

Range: San Gabriel Mts., eastern San Bernardino Mts.

Flowering time: April-June

Distinguishing features: Stem segment length > 2 times width, width < 2 times thickness.

Status: CNPS list: 1B; R-E-D Code: 3-1-3; State/Federal: /C2

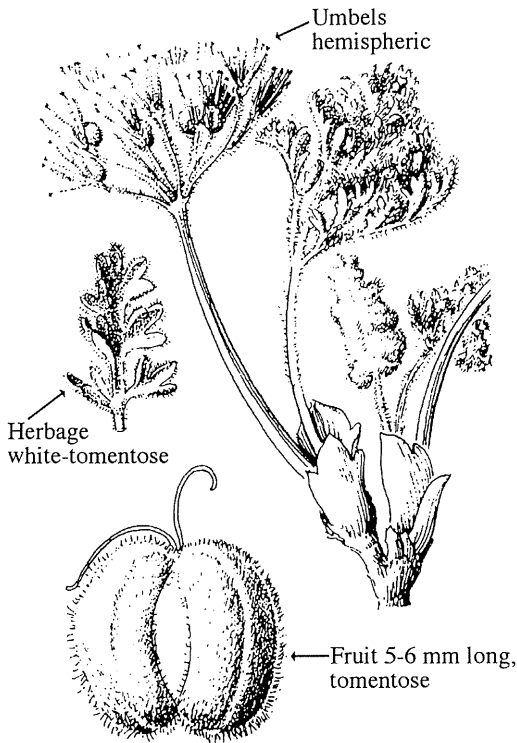
Notes: Intergrades with *O. basilaris* var. *basilaris*, which has larger, flatter stem segments; often difficult to distinguish.



Inflorescence of *O. vestita* by O. Mistretta.



Close-up of *Oreonana vestita* by O. Mistretta.



OREONANA VESTITA

Scientific name: *Oreonana vestita* (S. Watson) Jeps.

Common name: Woolly mountain-parsley

Family (Common name): Apiaceae (Carrot family)

Synonyms: —

General description: Plant 4-15 cm, white-tomentose. **LF** bladeless sheaths 1.5-3 cm. **INFL** umbel 2-5 cm. **FL** bisexual or staminate; corolla yellow or maroon; anthers yellow. **FR** 5-6 mm long, tomentose.

Habitat: Dry gravel or talus, 6500-11,000 ft.; upper Montane Coniferous Forest.

Range: San Gabriel and San Bernardino Mts.

Flowering time: June-July

Distinguishing features: Herbage white-tomentose; umbels hemispheric; corolla yellow or maroon; anther yellow; calyx lobes inconspicuous, obscured by hairs.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

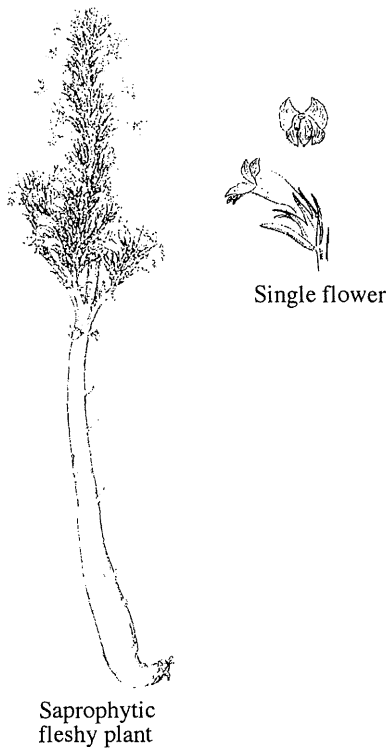


Top Left: *Orobanche valida* ssp. *valida* (foreground) parasitizing *Eriodictyon trichocalyx* by O. Mistretta.

Top Right: Close-up of *O. valida* ssp. *valida* by RT Hawke.



Habitat of *Orobanche valida* ssp. *valida* by O. Mistretta.



OROBANCHE VALIDA* SSP. *VALIDA

Scientific name: *Orobanche valida* Jeps. ssp. *valida*

Common name: Rock Creek broomrape

Family (Common name): Orobanchaceae (Broom-rape family)

Synonyms: —

General description: Saprophytic fleshy plant 10-35 cm tall. Dark purplish, glandular-puberulent. **ST** generally stout, not enlarged at base. **INFL** 2-3 cm wide. **FL** corolla 12-14 mm, sparsely hairy.

Habitat: Gravelly granitic talus; on *Eriodictyon*, *Garrya*, etc., 4000-7000 ft.; Chaparral, Yellow Pine Forest.

Range: San Gabriel Mts.

Flowering time: May-July

Distinguishing features: Corolla 12-14 mm, puberulent outside, weakly so to glabrous at sinus, hairs \pm 0.1 mm; filament base and anther glabrous.

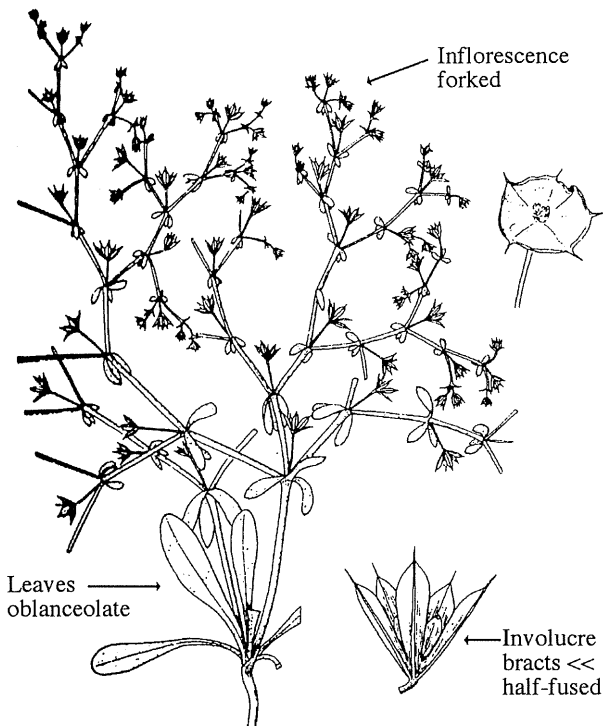
Status: CNPS list: 1B; R-E-D Code: 3-2-3; State/Federal: /C2



Close-up of *Oxytheca caryophylloides* by O. Mistretta.



Habitat of *Oxytheca caryophylloides* by O. Mistretta.



OXYTHECA CARYOPHYLLOIDES

Scientific name: *Oxytheca caryophylloides* Parry

Common name: Chickweed oxytheca

Family (Common name): Polygonaceae (Buckwheat family)

Synonyms: —

General description: Annual. **ST** erect 1 or several-stemmed at base, diffusely branched above, 10-40 dm high. **LF** 1-8 cm generally oblanceolate, strigose-glandular. **INFL** forked. **FL** perianth 1-2 mm greenish-white to reddish.

Habitat: 4000-7000 ft.; mostly Yellow Pine Forest.

Range: Ventura County, San Gabriel Mts, to San Jacinto Mts.

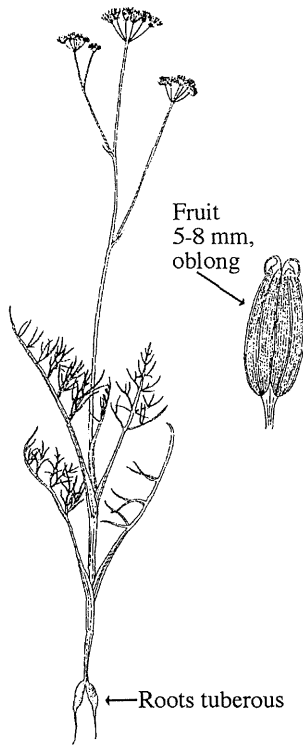
Flowering time: July-September

Distinguishing features: Involucral bracts << half fused; involucre funnel-shaped, not flattened or white-margined; perianth lobes with 3 ± regular lobes; flowers 1-2 mm.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Habit of *Perideridia pringlei* by O. Mistretta.



PERIDERIDIA PRINGLEI

Scientific name: *Perideridia pringlei* (Coult. & Rose) Nels. & Macbr.

Common name: Adobe yampah, Pringle's yampah

Family (Common name): Apiaceae (Carrot family)

Synonyms: —

General description: perennial herb 3.5-7.5 dm; roots tuberous. **LF** ± ovate, 2-pinnate; leaflets < 1 mm wide, linear. **INFL** peduncle 3-12 cm. **FL** petals white, 1-veined; styles 1 mm. **FR** 5-8 mm oblong.

Habitat: Damp meadows, clay substrates, etc., 4000-7500 ft.; Joshua Tree Woodland, Pinyon Juniper Woodland, Coniferous Forest.

Range: north slope San Gabriel Mts., Liebre Mtn., to Kern and San Luis Obispo Counties.

Flowering time: April-July

Distinguishing features: Secondary umbels convex on top, generally 20-25-flowered; umbels convex on top, rays subequal; oil tubes per rib-interval 3-4; petiole and leaf rachis ± spongy-inflated.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: /C3c



Close-up of *Polygala cornuta* var. *fishiae*. RSA file photo.



POLYGALA CORNUTA* VAR. *FISHIAE

Scientific name: *Polygala cornuta* Kell. var. *fishiae* (Parry) Jeps.

Common name: Fish's milkwort

Family (Common name): Polygalaceae (Milkwort family)

Synonyms: *Polygala cornuta* var. *pollardii* Munz

General description: Shrubby perennial often forming thickets < 2 m in diameter. **ST** many, slender, low-lying or erect. **LF** lanceolate to oblong-elliptic, glabrous. **FL** 7-12 mm outer sepals dark pink in bud, upper sepal generally rounded to obtuse; corolla reddish-purple.

Habitat: Shaded, rocky places in canyons below 3000 ft.; Southern Oak Woodland, Chaparral.

Range: Santa Monica Mts., Mt. Wilson, Santa Ana Mts., etc.; Lower California.

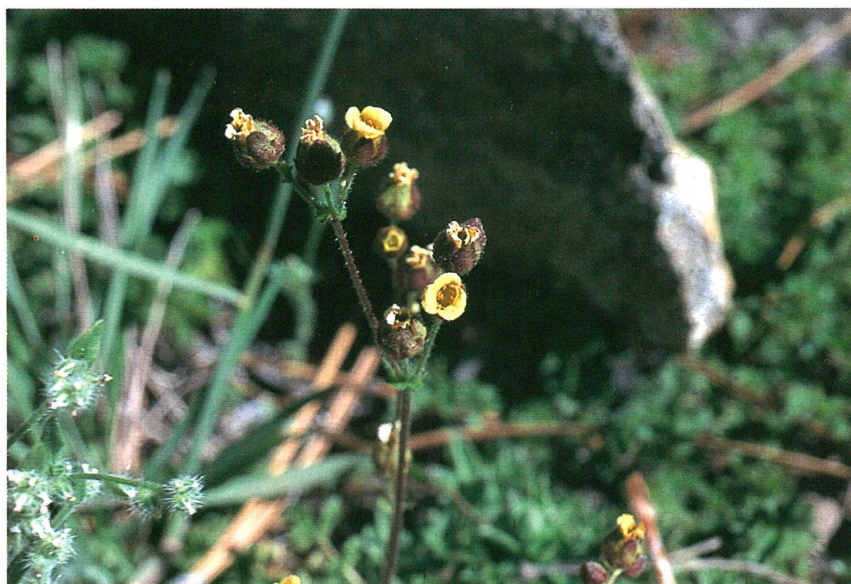
Flowering time: May-August

Distinguishing features: Flowers 7-11.2 mm; wings glabrous, ciliate, or puberulent near tip; upper sepal generally rounded to obtuse.

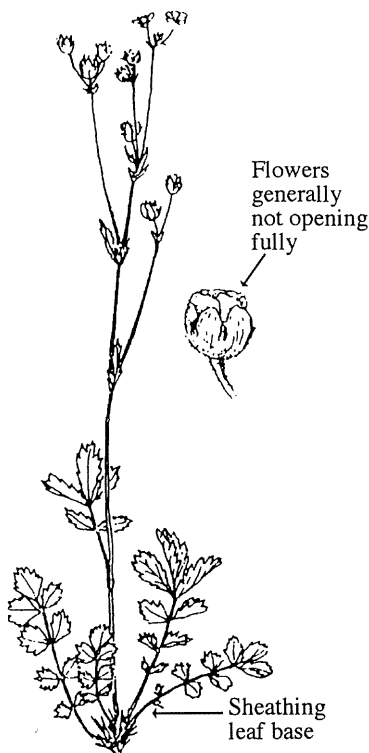
Status: CNPS list: 4; R-E-D Code: 1-1-2; State/Federal: none



Flower of *Potentilla glandulosa* ssp. *ewanii* by RT Hawke.



Close-up of *Potentilla glandulosa* ssp. *ewanii* by RT Hawke.



POTENTILLA GLANDULOSA* SSP. *EWANII

Scientific name: *Potentilla glandulosa* Lindley ssp. *ewanii* Keck

Common name: Ewan's cinquefoil

Family (Common name): Rosaceae (Rose family)

Synonyms: —

General description: Perennial herb. **ST** gen 5-20 cm, sparsely \pm glandular hairy. **LVS:** basal gen 3-10 cm, sheathing base gen strigose, terminal lflet gen 5-15 mm; lateral lflet teeth < 10 , gen single. **INFL:** branch angle gen $\pm 50^\circ$. **FL** not fully opening; bractlets < 0.5 mm wide; petals 3-4 mm, \pm = sepals, yellow; styles ± 1.5 -2.5 mm.

Habitat: seeps at about 6500-7500 ft. Yellow Pine Forest.

Range: Mt. Islip area, San Gabriel Mtns.

Flowering time: June

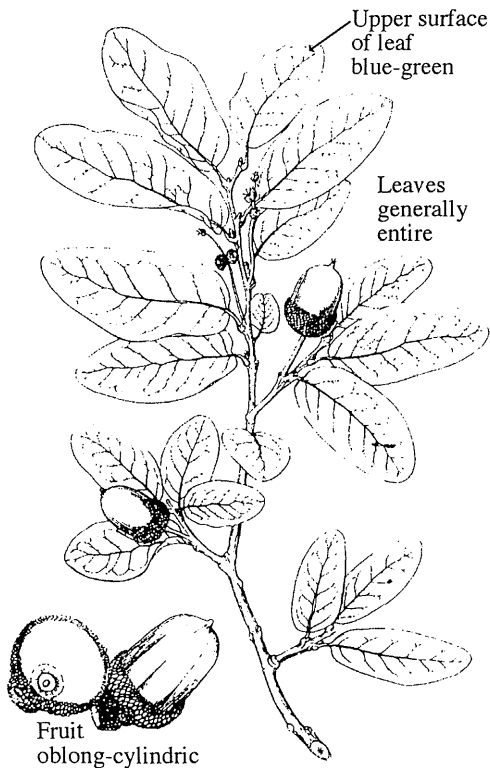
Distinguishing features: styles 1.5-2.5 mm; flrs gen not opening fully; sheathing lf base gen strigose.

Status: CNPS list: 1B; R-E-D Code: 3-1-3; State/Federal: none.

Notes: *Potentilla glandulosa* ssp. *glandulosa*, *nevadensis*, and *reflexa* also occur on Forest.



Close-up of *Quercus engelmannii* by RT Hawke.



QUERCUS ENGELMANNII

Scientific name: *Quercus engelmannii* Greene

Common name: Engelmann oak

Family (Common name): Fagaceae (Oak family)

Synonyms: —

General description: Spreading evergreen tree with rounded top, 5-18 m tall. Bark becoming narrowly furrowed and scaly, young tips covered with soft, short hairs. **LF** 2-6 cm, oblong to obovate, upper surface dull bluish-green. **FR** oblong-cylindric to ovoid 1.5-2.5 cm long.

Habitat: Dry fans and foothills, below 4000 ft.; Southern Oak Woodland.

Range: Pasadena region inland to San Dimas and disjunct south and east to eastern San Diego County.

Flowering time: April-May

Distinguishing features: Tree 5-18 m; leaves generally entire or wavy-dentate, upper surface blue-green, dull.

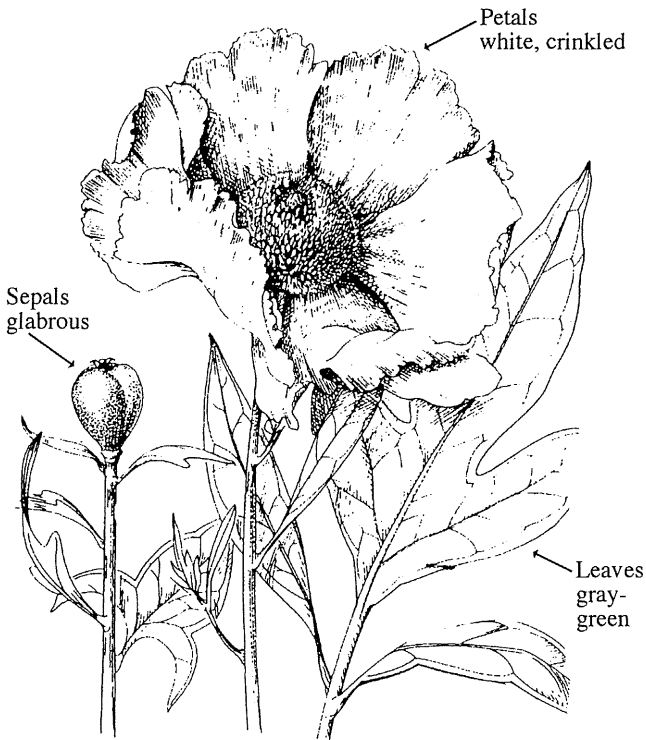
Status: CNPS list: 4; R-E-D Code: 1-2-2; State/Federal: none



Flowers of *Romneya coulteri* by W. Wisura.



Habit and habitat of *Romneya coulteri* by W. Wisura.



ROMNEYA COULTERI

Scientific name: *Romneya coulteri* Harv.

Common name: Coulter's matilija poppy

Family (Common name): Papaveraceae (Poppy family)

Synonyms: —

General description: Perennial to 2.5 m tall. **ST** leafy, branching. **LF** gray-green, 5-20 cm long, round-ovate with 3-5 divisions, sparingly dentate. **FL** 5-8 per stem; petals white, crinkled and very large (60-100 mm long); sepals glabrous. **FR** 3-4 cm long.

Habitat: Dry washes and canyons below 4000 ft.; Chaparral, Coastal Sage Scrub.

Range: Santa Ana Mts. to San Diego County

Flowering time: May-July

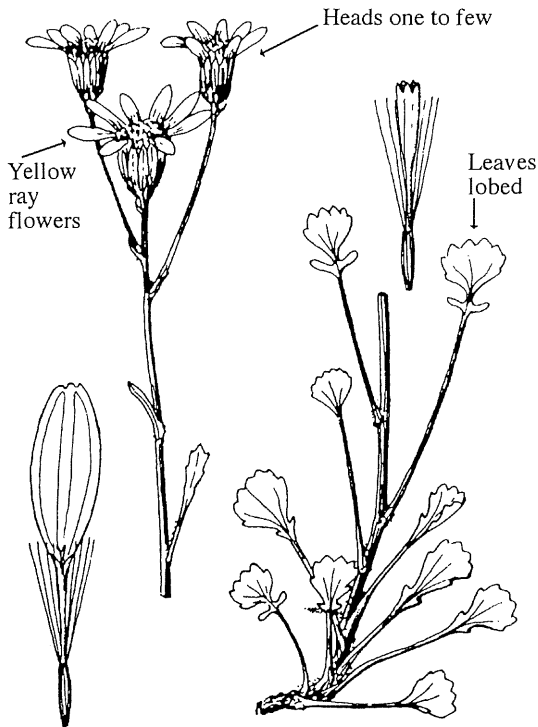
Distinguishing features: Sepals glabrous; petals 60-100 mm; leaf 5-20 cm.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

Notes: Known in the San Gabriel Mtns. only from Fish Canyon. May be introduced at this locality.



Close-up of *Senecio ionophyllus* by RT Hawke.



SENECIO IONOPHYLLUS

Scientific name: *Senecio ionophyllus* Greene

Common name: Tehachapi ragwort

Family (Common name): Asteraceae (Aster family)

Synonyms: —

General description: Herbaceous perennial from taproot or caudex, approximately 1-5 dm tall. **ST** Leafy at base becoming less so above.

LF ovate, few-toothed to deeply pinnatifid. **INFL** 1-few in head-like arrangement, radiate. **FL** yellow rays.

Habitat: Dry, rocky slopes; 6400-7500 ft.; Yellow Pine Forest.

Range: Tehachapi and Piute Mts., San Gabriel and San Bernardino Mts.

Flowering time: June-July

Distinguishing features: Heads 1-few (generally < 6); leaves lobed.

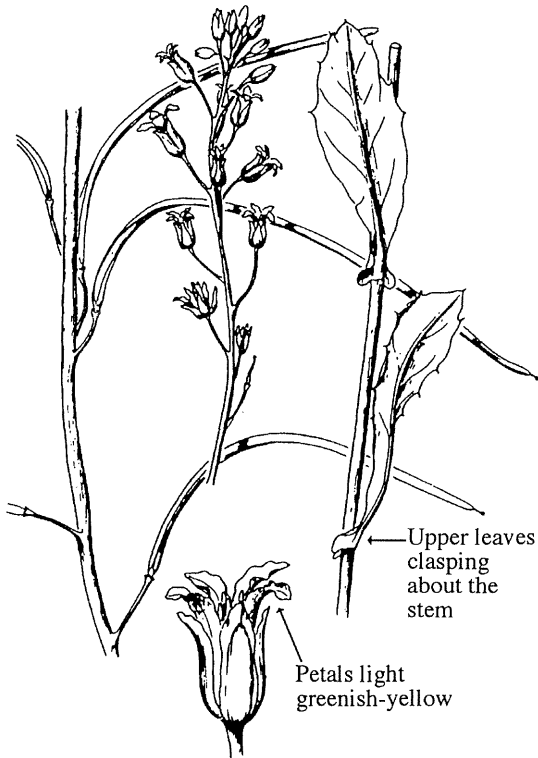
Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Close-up of *Streptanthus bernardinus* by O. Mistretta.



Habitat of *Streptanthus bernardinus* by O. Mistretta.



STREPTANTHUS BERNARDINUS

Scientific name: *Streptanthus bernardinus* (Greene) Parish

Common name: Laguna Mountains jewel-flower

Family (Common name): Brassicaceae (Mustard family)

Synonyms: —

General description: Perennial from a woody base. **ST** slender, 3-6 dm high. **LF** basal leaves broadly oblanceolate, upper cauline leaves clasping about the stem, lanceolate, purple-tinged and 1.5-4 cm long.

INFL open raceme. **FL** petals greenish-yellow; stamens slightly exserted. **FR** 5-8 cm long, generally straight.

Habitat: Dry slopes, 4000-7500 ft.; mostly Yellow Pine Forest.

Range: eastern San Gabriel Mts. to Laguna Mts.

Flowering time: June-July

Distinguishing features: Bracts 0; upper cauline leaves generally \pm strongly reduced upwards; petals light greenish yellow.

Status: CNPS list: 1B; R-E-D Code: 2-1-3; State/Federal: /C3c

Notes: Known from San Gabriel Mtns. in San Sevaine region, San Bernardino National Forest.



Close-up of *Swertia neglecta* by RT Hawke.



Habitat of *Swertia neglecta* by O. Mistretta.



SWERTIA NEGLECTA

Scientific name: *Swertia neglecta* (H.M. Hall) Jeps.

Common name: Pine green-gentian, Pine swertia

Family (Common name): Gentianaceae (Gentian family)

Synonyms: *Frasera neglecta* H.M. Hall

General description: Perennial from a woody root crown. **ST** basal rosette stems branched up to 5.5 dm tall. **LF** clustered at base, glabrous, linear to narrowly oblanceolate with narrow white margins. **FL** in dense whorls, pedicels 5-20 mm long; corolla greenish-white with purple veins.

Habitat: Dry slopes, 4500-8000 ft.; largely Yellow Pine Forest

Range: Desert slopes of the San Gabriel and San Bernardino Mts., Mt. Pinos region.

Flowering time: May-July

Distinguishing features: Nectary pits \pm round; stamen bases with a low, fringed ridge between.

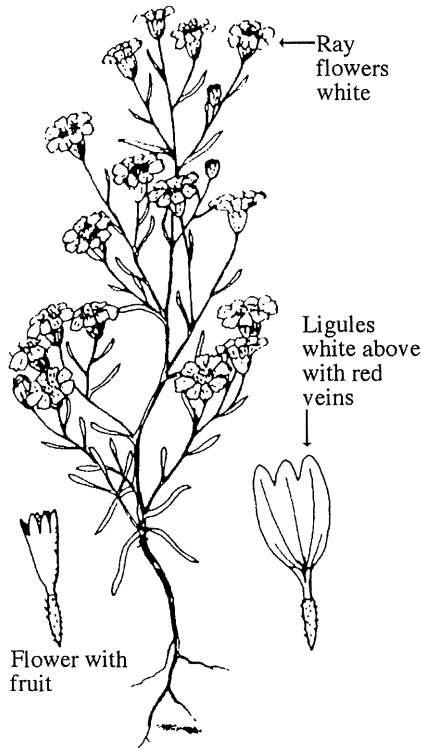
Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none



Close-up of *Syntrichopappus lemmonii* by O. Mistretta.



Habitat of *Syntrichopappus lemmonii* by O. Mistretta.



SYNTRICHOPAPPUS LEMMONII

Scientific name: *Syntrichopappus lemmonii* (Gray) Gray

Common name: Lemmon's syntrichopappus

Family (Common name): Asteraceae (Aster family)

Synonyms: —

General description: Annual, 2-10 cm tall. Plants with \pm erect, lightly woolly herbage. **LF** linear, 3-8 mm long. **FL** ray flowers white with cream-yellow base on ventral side and rose with distinctly red-colored veins on dorsal side.

Habitat: Sandy places, 3000-5000 ft.; Chaparral, Joshua Tree woodland, Pinyon Juniper Woodland.

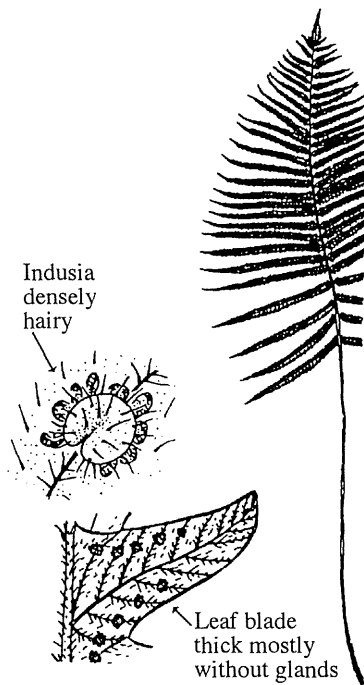
Range: Desert and adjoining slopes of the San Gabriel and San Bernardino Mts.; Hemet Valley, south slope of San Jacinto Mts.,

Flowering time: April-May

Distinguishing features: Ligules white above with red veins.

Status: CNPS list: 4; R-E-D Code: 1-1-3; State/Federal: none

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THELYPTERIS PUBERULA* VAR. *SONORENSIS

Scientific name: *Thelypteris puberula* (Baker) C. Morton var. *sonorensis* A. Reed Smith

Common name: Sonoran maiden fern

Family (Common name): Thelypteridaceae (Thelypteris family)

Synonyms: —.

General description: Rhizomatous perennial herb. Rhizome creeping, 3-8 mm wide. **LVS** regularly spaced, gen 50-120 cm, 15-30 cm wide; petiole scales lanceolate, brown, not persistent; blade thick, lower surface \pm without glands, with non-glandular hairs moderate to dense on axes, veins, and between veins. **SPORANGIA:** indusia densely hairy.

Habitat: Along streams, seepage areas; below 1500 ft.

Range: south coast, western transverse ranges, San Gabriel Mtns., San Jacinto Mtn., to Arizona, s. Mexico. Probably known from fewer than 10 sites in Southern California.

Status: CNPS list: 2; R-E-D Code: 2-2-1; State/Federal: none.

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APPENDIX

Additional Rare Plant Species

- Acanthomintha obovata* Jepson ssp. *cordata* Jokerst [CNPS list 4/1-2-3]. Known from one collection in the western Liebre Mtns on the Saugus District of the Angeles National Forest, thence disjunct to Ventura and San Luis Obispo Counties.
- Calandrinia breweri* S. Watson [CNPS list 4/1-2-2]. Widespread in the California Floristic Province, but uncommon throughout its range. It tends to be a fire follower, and was last collected in the San Gabriel Mtns. in 1971.
- Calochortus clavatus* S. Watson ssp. *clavatus* [CNPS list 4/1-1-3]. Of scattered occurrence in the Liebre Mtns. (Saugus District), and largely occurring westward in the Western Transverse Ranges and northward in the South Coast Ranges.
- Camissonia lewisii* Raven [CNPS list 3/?-?-2]. Formerly occurring at fairly low elevations around the Los Angeles Basin, southward near the coast to Baja California. Difficult to distinguish from closely related species.
- Erigeron breweri* A. Gray var. *bisanctus* Nesom [CNPS list 1B/2-2-3]. Recently described and restricted to the low- to mid-elevations of the San Gabriel and San Bernardino Mtns.
- Erigeron breweri* A. Gray var. *jacinteus* (H. M. Hall) Cronquist [CNPS list 4/1-1-3]. Restricted to the higher elevations of the San Gabriel, San Bernardino and San Jacinto Mtns.
- Juglans californica* S. Watson var. *californica* [CNPS list 4/1-2-3]. Largely restricted to low hills and foothills surrounding the Los Angeles Basin. This endemic walnut has been severely depleted by development.
- Phacelia exilis* (A. Gray) G. J. Lee [CNPS list 4/1-1-3]. Annual, of scattered occurrence on slopes bordering the southwestern edge of the Mojave desert. Difficult to identify.
- Phacelia mohavensis* A. Gray [CNPS list 4/1-1-3]. Closely related to *P. exilis* and occurring on desert slopes of the San Gabriel and San Bernardino Mtns. These two species, along with *P. austromontana* and *P. davidsonii*, are difficult to tell apart.
- Selaginella asprella* Maxon [CNPS list 4/1-1-2]. Restricted to high elevation outcrops from the southern Sierra Nevada to northern Baja California. Largely protected by inaccessibility.
- Thermopsis californica* S. Watson var. *argentata* (Greene) Chen & B. Turner [CNPS list 4/1-1-3]. Uncommon in the northern Liebre Mtns. and Western Transverse Ranges, thence disjunct to northeastern California.